Ref. No.3584

# ONKYO® SERVICE MANUAL

## AUDIO VIDEO CONTROL
## RECEIVER
## MODEL TX-SV646

**Black and Golden models**

| | |
|---|---|
| BMP,BMPT,BMPA,GMPT | 230V AC, 50Hz |
| BMWT, GMWT | 220-230V/120V AC, 50/60Hz |
| BMD | 120V AC, 60Hz |

**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
AUDIO COMPONENTS

# SPECIFICATIONS

## AMPLIFIER SECTION

Power Output (U.S. and Canadian model):

Stereo mode

Front L/R channels

**90 watts per channel min. RMS. at 8 ohms, both channels driven, from 20 Hz to 20,000 Hz, with no more than 0.08% total harmonic distortion.**

Continuous power output:

2 × 100 watts at 8 ohms (DIN)

Surround mode and Multi source mode

Front L/R and Center channels

80 W + 80 W + 80 W (1 kHz 0.08 % 8 ohms)

Rear channels (Rear only driven)

30 W + 30 W (1 kHz 0.8 % 8 ohms)

Remote channels

30 W + 30 W (1 kHz 0.08 % 8 ohms)

Power Output (Other models):

Stereo mode

Continuous power output:

2 × 100 watts at 6 ohms (DIN)

Surround mode and Multi source mode

Continuous power output:

Front L/R and Center channels

3 × 95 watts at 6 ohms (DIN)

Rear channel

2 × 40 watts at 6 ohms (DIN)

Remote channels

2 × 40 watts at 6 ohms (DIN)

IM Distortion: 0.08% at rated power (FRONT)

Damping Factor: 60 at 8 ohms (FRONT)

Input Sensitivity/Impedance

PHONO: 2.5 mV/50 kohms

CD/TAPE-1, 2/VIDEO-1, 2, 3: 200 mV/50 kohms

Multi Channel Input (Front L/R, Surround L/R, Center): 200 mV/50 kohms

Multi Channel Input (Subwoofer): 36 mV/50 kohms

Output Level/Impedance

REC OUT: 200 mV/2.2 kohms

PRE OUT: 1 V/470 ohms

Phono Overload: 120 mV RMS. at 1,000 Hz, 0.5% THD.

Frequency Response: 20 to 30,000 Hz, +/–1 dB

RIAA Deviation: 20 to 20,000 Hz, +/–0.8 dB

Tone Control: BASS: +/–10 dB at 100 Hz

TREBLE: +/–10 dB at 10,000 Hz

Signal to Noise Ratio: PHONO: 80 dB (IHF A, 5 mV input)

CD/TAPE: 100 dB (IHF A)

Muting: – ∞ dB

## VIDEO SECTION

Television Format: NTSC (U.S. and Canadian models)
NTSC/PAL (Other models)

Input Sensitivity/Impedance

VIDEO (Composite):
1 Vp-p/75 ohms

S-VIDEO (Y signal):
1 Vp-p/75 ohms (except U.S. and Canadian models)

S-VIDEO (C signal):
0.28 Vp-p/75 ohms (except U.S. and Canadian models)

Output Level/Impedance

VIDEO (Composite):
1 Vp-p/75 ohms

S-VIDEO (Y signal):
1 Vp-p/75 ohms (except U.S. and Canadian models)

S-VIDEO (C signal):
0.28 Vp-p/75 ohms (except U.S. and Canadian models)

## TUNER SECTION

### FM:

Tuning Range: 87.5 — 108.0 MHz (50 kHz steps)

Usable Sensitivity: Mono: 11.2 dBf, 1.0 µV (75 ohms)
0.9 µV (26 dB S/N, 40 kHz Div.) 75 ohm DIN
Stereo: 17.2 dBf, 2.0 µV (75 ohms)
23 µV (46 dB S/N, 40 kHz Div.) 75 ohm DIN

50dB Quieting Sensitivity: Mono: 17.2 dBf, 2.0 µV (75 ohms)
Stereo: 37.2 dBf, 20 µV (75 ohms)

Capture Ratio: 1.5 dB

Image Rejection Ratio: U.S. & Canadian models: 40 dB
Other area models: 85 dB

IF Rejection Ratio: 90 dB

Signal-to-Noise Ratio: Mono: 73 dB
Stereo: 70 dB

Alternate Channel Attenuation: 55 dB, 50 dB (DIN)

AM Suppression Ratio: 50 dB

Total Harmonic Distortion: Mono: 0.1%
Stereo: 0.2%

Frequency Response: 30 — 15,000 Hz +/–1.5 dB

Stereo Separation: 45 dB at 1 kHz/30 dB at 100 — 10,000 Hz

Muting Level: 17.2 dBf, 2.0 µV (75 ohms)

### AM:

Tuning Range: European models
522 — 1611 kHz (9 kHz steps)
U.S. & Canadian models
530 — 1710 kHz (10 kHz steps)
Worldwide model
531 — 1602 kHz (9 kHz steps)
530 — 1710 kHz (10 kHz steps)

Usable Sensitivity: 30 µV

Image Rejection Ratio: 40 dB

IF Rejection Ratio: 40 dB

Signal-to-Noise Ratio: 40 dB

Total Harmonic Distortion: 0.7%

## GENERAL

Power Supply: AC120 V, 60 Hz
AC230 V, 50 Hz
120 and 220-230 V switchable, 50/60 Hz

Dimensions (W × H × D): 435 × 175 × 390 mm
17-1/8" × 6-7/8" × 15-3/8"

Mass: 12.2 kg (26.9 lbs) (AC 120 V, 60 Hz model)
13.0 kg (28.7 lbs) (Other models)

Specifications and features are subject to change without notice.

# SERVICE PROCEDURES

**1. Replacing the fuses**

This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce darnier est indique la qu le present symbol est appose.

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| F901 | 252198 | ⚠ 8A-UL, Primary fuse <D/W> |
| F902 | 252077 | ⚠ 4A-SE-EAK,Primary fuse <P/T/W/A> |
| F903 | 252075 | ⚠ 2.5A-SE-EAK, Fuse <P> |
| | 252074 | ⚠ 2A-SE-EAK,Fuse <T/A> |
| F915,F916 | 252166 | ⚠ 6.3A-UL/T-237,Secondary fuse <D> |
| | 252079 | ⚠ 6.3A-SE-EAK,Secondary fuse <P/T/W/A> |

NOTE:
<D>:120V model only
<P>: 230V model only
<T>: Asian model only
<W>: Worldwide model only
<A>: Australian model only

**2. To Initialize the unit**

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

1. **Press and hold down the CD button, then press the POWER button.**
2. **After "clear" is displayed, the prest memory and each mode stored in the memory, such as surround, are initialized and will return to the factory settings.**

**3. Safety-check out**

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and the screw on the back panel.

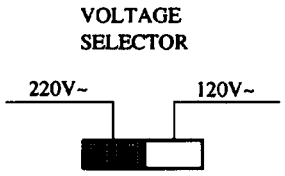
Specifications: 3.3 Mohm±10% at 500V.

**4. Change of voltage**

Worldwide models are equipment with a voltage selector to conform with local power supplies. This switch is located on the back panel.

Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.




**5. Memory preservation**

This unit does not require memory preservation batteries.

A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged.

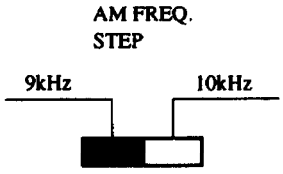
The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month the keep the back-up system operative.

The period of the time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorted when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

**6. Setting the tuning step frequency**

Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 9 kHz at the factory, but may have to be reset to 10 kHz depending on the area where the unit is used.

| | AM band step |
|---|---|
| Europe: | 9 kHz |
| U.S.A.: | 10 kHz |




**7. Changing the band step**

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

| | To 10 kHz | To 9 kHz |
|---|---|---|
| R745 | No connection | 2.7 kohm |
| R746 | 10 kohm | 1.5 kohm |

# ADJUSTMENT PROCEDURES

## FM

| Item | Step | Connection of instrument | FM SG output | Stereo modulator output | Tuning frequency | Output indicator | Adjustment point | Adjust for | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| FM IF/RF | 1 | Fig.1 | 99.0MHz 1kHz 75kHz devi. 65dBf(60dB) | — | 99.0MHz | DC voltmeter | L101 | 0±20mV | FM MUTE/MODE switch:ON/STEREO Repeat the steps 1 and 3 until no further adjustment is necessary. |
| | 2 | | | | | AC voltmeter | IFT on the front end | Maximum | |
| | 3 | | | | | Distortion analyzer | L102 | Minimum | |
| Stereo Distortion | | Fig.2 | 99.0MHz Ext. mod.65dBf(60dB) | Channel L or R 1kHz | 99.0MHz | Distortion analyzer | IFT on the front end | Minimum | Don't turn more than ±180° |
| Stereo Separation | 1 | Fig.2 | 99.0MHz Ext. mod. 65dBf(60dB) | Channel L 1kHz | 99.0MHz | Channel R AC voltmeter | R150 | Minimum | Maximum and same separation |
| | 2 | | | Channel R 1kHz | | Channel L AC voltmeter | | Minimum | |
| Muting Level | | Fig.3 | 99.0MHz 19.2dBf(14dB) | — | 99.0MHz | TUNED indicator | R158 | Light on | |

## AM

120V model

| Step | AM SG output | Tuning Frequency | Output Indicator | Adjustment point | Adjust for |
|---|---|---|---|---|---|
| 1 | | 530kHz | Digital DC voltmeter | OSC coil on RF block L105 | 1.4±0.2V |
| 2 | 600kHz 400Hz 30% mod. 60dB/m | 600kHz | AC voltmeter | RF coil on RF block L105 | Maximum |
| 3 | 990kHz 400Hz 30% mod. 60dB/m | 990kHz | AC voltmeter | L106 | Maximum |

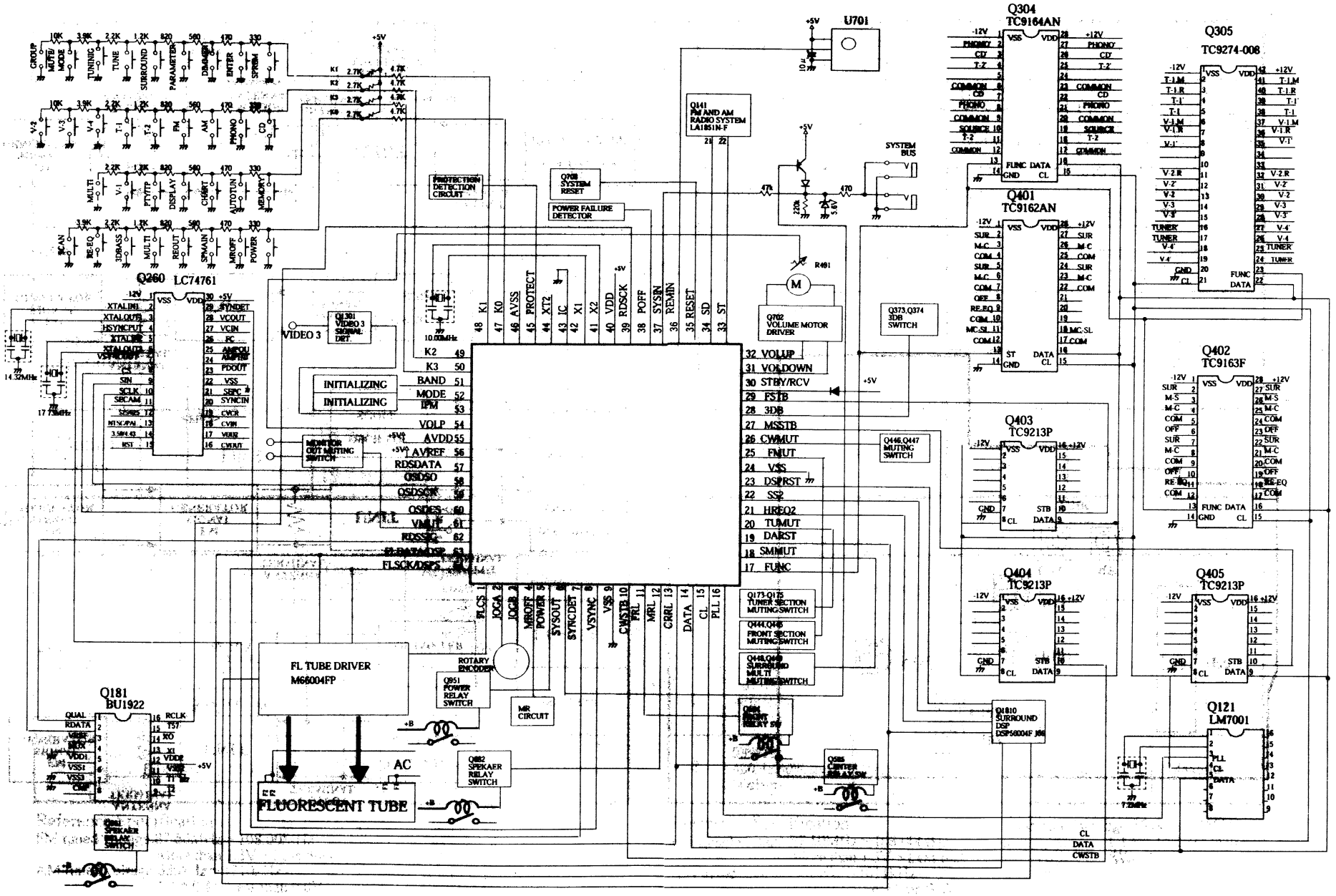
Reference Specification
FM tuned voltage:87.50MHz~108.00MHz
More than 1.3V~Less than 9V
AM tuned voltage:530kHz~1710kHz
1.4±0.4~Less than 9.0V

230V and Wolrdwide models

| Step | AM SG output | Tuning Frequency | Output Indicator | Adjustment point | Adjust for |
|---|---|---|---|---|---|
| 1 | | 522kHz or 531kHz | Digital DC voltmeter | OSC coil on RF block L105 | 1.4±0.2V |
| 2 | 603kHz 400Hz 30% mod. 60dB/m | 603kHz | AC voltmeter | RF coil on RF block L105 | Maximum |
| 3 | 999kHz 400Hz 30% mod. 60dB/m | 999kHz | AC voltmeter | L106 | Maximum |

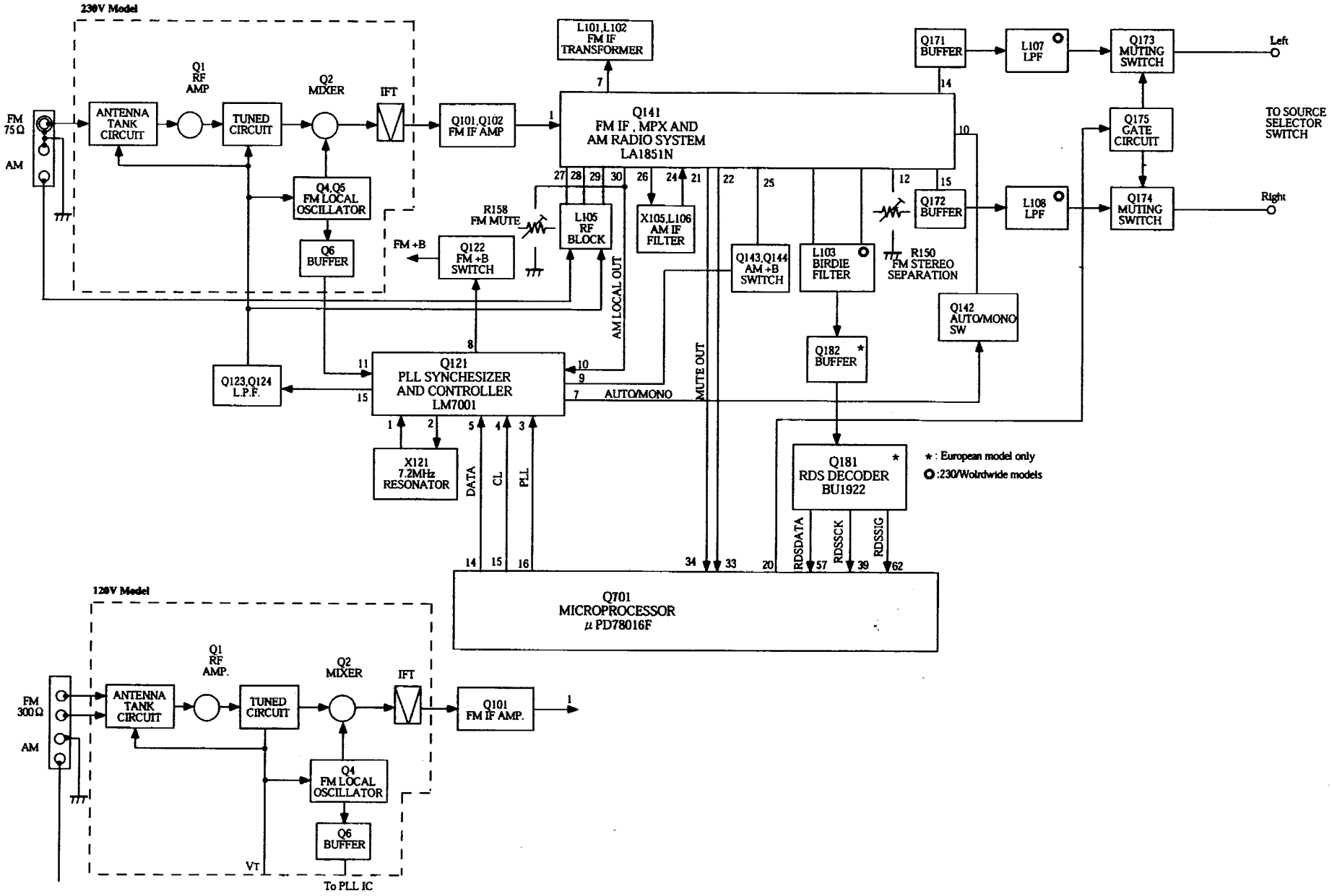
Reference Specification
FM tuned voltage:87.50MHz~108.00MHz
More than 1.3V~Less than 9V
AM tuned voltage:522kHz~1611kHz
1.4±0.4~Less than 9.0V
(230V model)
AM tuned voltage:531kHz~1602kHz
1.4±0.4~Less than 9.0V
(Worldwide model)

# MICROPROCESSOR CONNECTION DIAGRAM



# BLOCK DIAGRAM

## TUNER SECTION



# PRINTED CIRCUIT BOARD-PARTS LIST

**MAIN CIRCUIT PC BOARD(NAAR-6095-3A/3B/3C/3D)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **ICs** | |
| Q1301,Q1371 | 22240293 or | NJM4558L-D or |
| Q303 | 22240247 | BA15218N |
| Q301 | 22240191 | NJM4565D-D |
| Q304 | 22240800 | TC9164AN |
| Q305 | 22240829 | TC9274N-008 |
| Q371,Q372 | 22240293 or | NJM4558L-D or |
| | 22240247 | BA15218N |
| Q701 | 22241204 | MPD78018FGC-531 |
| Q702 | 22240239 | TA7291S |
| Q921 | 222780055 | 78M05HF |
| Q922 | 222780565JRC | 78M56(NJM78M56FA) |
| Q923 | 222780125 | 78M12HF |
| Q924 | 222790125 | 79M12HF |
| Q925 | 222780075 | 78M07HF |
| Q926 | 222790075 | 79M07HF |
| | **Transistors** | |
| Q1372 | 2211945 | 2SK246-GR |
| Q1391 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 |
| Q1392 | 2212600 | DTA124ES |
| Q1393 | 2213816 or | 2SD1450-T or |
| | 2212356 | 2SD1302-T |
| Q373,Q374 | 2211945 | 2SK246-GR |
| Q703 | 221282 or | DTC144ES or |
| | 2213560 | RN1204 |
| Q704 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 |
| Q927 | 2211255 | 2SC1815-GR |
| Q929 | 2211455 | 2SA1015-GR |
| Q928 | 2213640 or | DTC123JS or |
| | 2214660 | RN1205 |
| | **Diodes** | |
| D1301,D1302 | 223163 or | 1SS133 or |
| D1371 | 223205 | 1SS270A |
| D371,D372 | 223163 or | 1SS133 or |
| D701-D704 | 223205 | 1SS270A |
| D705 | 224470562 | MTZJ5.6B |
| D706 | 224470623 | MTZJ6.2C |
| D707,D708 | 223163 or | 1SS133 or |
| D926-D929 | 223205 | 1SS270A |
| D921 | 22380022F, | RBV402, |
| | 22380271F or | D3SBA20 or |
| | 22380285F | RS403M |
| D922-D925 | 22380260, | RL1N4003, |
| D930,D932 | 22380032 or | 1SR139-100 or |
| D933,D935 | 22380035 | GP104003E |
| D934 | 224473604 | MTZJ36D |
| | **Coil** | |
| L701 | 233454K220 | NCH-1452 220K |
| | **Oscillator** | |
| X701 | 3010239 | CST10.0MTW |
| | **Capacitors** | |
| C1301-C1304 | 354741009 | 10μF,16V,Elect. |
| C1306 | 374721034 | 0.01μF±5%,50V,Plastic |
| C1307,C1372 | 354741009 | 10μF,16V,Elect. |
| C1375,C1376 | 374721044 | 0.1μF±5%,50V,Plastic |
| C303,C304 | 354741009 | 10μF,16V,Elect. |
| C305,C306 | 354721019 | 100μF,6.3V,Elect. |
| C307,C308 | 374726824 | 6800pF±5%,50V,Plastic |

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Capacitors** | |
| C309,C310 | 374721824 | 1800pF±5%,50V,Plastic |
| C311,C312 | 354741009 | 10μF,16V,Elect. |
| C341,C342 | 354741009 | 10μF,16V,Elect. |
| C363,C364 | 354742209 | 22μF,16V,Elect. |
| C373,C374 | 354741009 | 10μF,16V,Elect. |
| C379-C382 | 374721044 | 0.1μF±5%,50V,Plastic |
| C383,C384 | 374721534 | 0.015μF±5%,50V,Plastic |
| C385,C386 | 354741009 | 10μF,16V,Elect. |
| C702 | 375524744 | 0.47μF±5%,50V,Plastic |
| C703 | 3000076 or | EECS5R5T104 or |
| | 3000078 | DX-5R5L104 |
| C704,C705 | 354721019 | 100μF,6.3V,Elect. |
| C706 | 354741009 | 10μF,16V,Elect. |
| C707 | 354780109 | 1μF,50V,Elect. |
| C708 | 354721019 | 100μF,6.3V,Elect. |
| C921,C922 | 3504312 or | 4700μF,40V,Elect. or |
| | 3504316 | 4700μF,40V,Elect. |
| C923 | 354742229 | 2200μF,16V,Elect. |
| C925,C928 | 354741009 | 10μF,16V,Elect. |
| C926 | 354754719 | 470μF,25V,Elect. |
| C931 | 354782219 | 220μF,50V,Elect. |
| C932 | 354762219 | 220μF,35V,Elect. |
| C933 | 354754729 | 4700μF,25V,Elect. |
| C934,C949 | 354751029 | 1000μF,25V,Elect. |
| C937,C938 | 354741009 | 10μF,16V,Elect. |
| C941,C942 | 354741009 | 10μF,16V,Elect. |
| | **Resistors** | |
| R921 | 453630474 | 4.7Ω±5%,1W, Metal |
| R923,R929 | 443522204 | 22Ω±5%,1/2W, Metal oxide |
| R924 | 443523314 | 330Ω±5%,1/2W, Metal oxide |
| R925,R931 | 443621204 | 12Ω±5%,1W, Metal oxide |
| R932 | 443524704 | 47Ω±5%,1/2W, Metal oxide |
| R933,R936 | 453630684 | 6.8Ω±5%,1W, Metal |
| R934 | 443526804 | 68Ω±5%,1/2W, Metal oxide |
| R935 | 453530104 | 1Ω±5%,1/2W, Metal |
| | **Sockets** | |
| JL602a | 25051090 | NSCT-6P877 |
| JL691a | 25051107 | NSCT-3P894 |
| JL701a | 25051847 | NSCT-40P1634 |
| JL701aor | 25050980 | NSCT-40P767 |
| JL701aor | 25051306 | NSCT-40P1095 |
| JL922a | 25051113 | NSCT-9P900 |
| JL971a,JL972a | 25051090 | NSCT-6P877 |
| | **Terminals** | |
| P301-P303 | 25045458 or | NPJ-6PDBL279 or |
| | 25045300 | NPJ-6PDBL159 |
| P304 | 25045460 or | NPJ-4PDBL281 or |
| | 25045303 | NPJ-4PDBL162 |
| | **Plugs** | |
| P102a | 25055652 | NPLG-14P608 <D/T/W/A> |
| | 25055653 | NPLG-16P609 <P> |
| P245a | 25055133 | NPLG-3P117 |
| JL391b | 25055628 | NPLG-7P590 |
| P401a | 25055704 | NPLG-8P660 |
| P402a,P403a | 25055808 | NPLG-19P764 |
| | **Heatsinks** | |
| Q921a,Q925a | 27160227 | RAD-076 |
| Q922a | 27160209 | RAD-67 |
| | **Screws** | |
| Q921b,Q922b | 838430107 | 3TTP+10S(BC) |
| Q925b | 838430107 | 3TTP+10S(BC) |

**DISPLAY CIRCUIT PC BOARD (NADIS-6100-3A/3B/3C)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **FL tube** | |
| Q1704 | 212163 | 14-ST-19GK |
| | **Remote sensor** | |
| U1701 | 241305 | GP1U281X |
| | **IC** | |
| Q1701 | 22240685R9 | M66004FP |
| | **Diodes** | |
| D1701,D1702 | 223163 or | 1SS133 or |
| D1704 | 223205 | 1SS270A |
| D1705,D1706 | 225291D | SEL4910D-D |
| D1703 | 224471803 | MTZJ18C |
| | **Capacitors** | |
| C1705,C1711 | 375524744 | 0.47μF±5%,50V,Plastic |
| C1709 | 353721019 | 100μF,6.3V,Elect. |
| C1712 | 353781009 | 10μF,50V,Elect. |
| C1717 | 353741009 | 10μF,16V,Elect. |
| | **Resistors** | |
| R1741 | 49163103414 | RM1/10IJ-10K*14,Array |
| | **Sockets** | |
| JL701b | 25051884, | NSCT-40P1671, |
| | 25050946 or | NSCT-40P733 or |
| | 25051344 | NSCT-40P1133 |
| JL801a,JL802a | 25051093 | NSCT-9P880 |
| | **Switches** | |
| S1701-S1716 | 25035652 | NPS-111-S604 |
| S1717 | 25035652 | NPS-111-S604 <P> |
| S1718-S1728 | 25035652 | NPS-111-S604 |
| S1730-S1732 | 25035652 | NPS-111-S604 |
| S1734,S1735 | 25035652 | NPS-111-S604 |
| S1737 | 25065528 | EC16B24104 |
| | **Holders** | |
| U1701a | 27191042 | Remote sensor |
| Q1704a | 27191001 | FL tube |

**DSP CIRCUIT PC BOARD(NADG-6125-3A/3B)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **ICs** | |
| Q1801-Q1803 | 22240293 or | NJM4558L-D or |
| Q1805 | 22240247 | BA15218N |
| Q1804 | 22241128R9 | CS4222-KS |
| Q1807 | 22241127R9 | CS4327-KS |
| Q1808 | 222740046R9 | 74HCU04 |
| Q1809 | 22241126R9O | TC74HC4040AF |
| Q1810 | 22240831R3 or | DSP56004FJ50 or |
| | 22240940R3 | DSP56004FJ66 |
| Q1811 | 22241108R9 | M5M5256DFP-70L |
| Q1812,Q1813 | 222780053 | 78L05 |
| | **Diodes** | |
| D1801,D1802 | 223205 or | 1SS270A or |
| | 223163 | 1SS133 |
| | **Oscillators** | |
| X1801 | 3010278 | CST12.2MTW040 |
| | **Coils** | |
| L1801-L1808 | 233454K220 | NCH-1452 220K |
| L1809,L1810 | 233454M022 | NCH-1452 022M |
| L251,L253 | 233454K220 | NCH-1452 220K |
| L252 | 233454K056 | NCH-1452 056K |

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Capacitors** | |
| C1801-C1806 | 354741009 | 10μF,16V,Elect. |
| C1811,C1812 | 374722224 | 2200pF±5%,50V,Plastic |
| C1813-C1816 | 374721015 | 100pF±10%,50V,Plastic |
| C1817-C1820 | 374721824 | 1800pF±5%,50V,Plastic |
| C1821-C1824 | 374722224 | 2200pF±5%,50V,Plastic |
| C1825-C1828 | 374722715 | 270pF±10%,50V,Plastic |
| C1829,C1830 | 354741009 | 10μF,16V,Elect. |
| C1831,C1833 | 354721019 | 100μF,6.3V,Elect. |
| C1832,C1858 | 375524744 | 0.47μF±5%,50V,Plastic |
| C1835,C1836 | 354741009 | 10μF,16V,Elect. |
| C1837,C1838 | 374721824 | 1800pF±5%,50V,Plastic |
| C1839,C1840 | 374721224 | 1200pF±5%,50V,Plastic |
| C1841,C1842 | 374721524 | 1500pF±5%,50V,Plastic |
| C1843,C1844 | 374721815 | 180pF±10%,50V,Plastic |
| C1849,C1850 | 353741009 | 10μF,16V,Elect. |
| C1851,C1852 | 353721019 | 100μF,6.3V,Elect. |
| C1855,C1864 | 354721019 | 100μF,6.3V,Elect. |
| C1859 | 374722234 | 0.022μF±5%,50V,Plastic |
| C1861 | 375524744 | 0.47μF±5%,50V,Plastic |
| C1867 | 354721019 | 100μF,6.3V,Elect. |
| C1868,C1869 | 354741009 | 10μF,16V,Elect. |
| | **Plugs** | |
| JL801b,JL802b | 25055630 | NPLG-9P592 |
| | **Shield case** | |
| Q1801a | 27150428 | (PC) |

**HEADPHONE TERMINAL PC BOARD(NAETC-6104-3A/3B/3C)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| JL571a | 25051107 | NSCT-3P894,Socket |
| P571 | 25045255 | YKB26-5009,Headphone terminal |

**FRONT/CENTER POWER AMP. PC BOARD (NAAF-6108-3A/3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| | **Transistors** | | |
| Q1501-Q1503 | 2211733 or | | 2SC1845-E or |
| Q1515 | 2211732 | | 2SC1845-F |
| Q1504 | 2213284 or | | 2SC1740S-R or |
| | 2212115 | | 2SC2458-GR |
| Q1505,Q1506 | 2211354 or | | 2SA949-Y |
| Q1508 | 2211353 | | 2SA949-O |
| Q1507,Q1509 | 2211634 or | | 2SC2229-Y |
| | 2211633 | | 2SC2229-O |
| Q1511 | 2203010 | | 2SC5171 |
| Q1512 | 2203000 | | 2SA1930 |
| Q1513 | 2202822 or | * | 2SC5200-R or |
| | 2202823 | * | 2SC5200-O <D> |
| Q1513 | 2201653, | * | 2SC3856-O, |
| | 2201655, | * | 2SC3856-P, |
| | 2201654, | * | 2SC3856-Y, |
| | 2202842 or | * | 2SC5242-R or |
| | 2202843 | * | 2SC5242-O <P/T/W/A> |
| Q1514 | 2202812 or | * | 2SA1943-R or |
| | 2202813 | * | 2SA1943-O,Transistor <D> |
| Q1514 | 2201663, | * | 2SA1492-O, |
| | 2201665, | * | 2SA1492-P, |
| | 2201664, | * | 2SA1492-Y, |
| | 2202832 or | * | 2SA1962-R or |
| | 2202833 | * | 2SA1962-O <P/T/W/A> |
| Q1516 | 2212654 or | | 2SC3421-Y or |
| | 2212653 | | 2SC3421-O |

**CAUTION:** Replacement of the transistor of mark *, if necessary, must be made from the same beta group (HFE) as the original type.

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| | **Transistors** | | |
| Q501-Q506 | 2211733 or | | 2SC1845-E or |
| Q529,Q530 | 2211732 | | 2SC1845-F |
| Q507,Q508 | 2213284 or | | 2SC1740S-R or |
| Q582,Q583 | 2212115 | | 2SC2458-GR |
| Q509-Q512 | 2211354 or | | 2SA949-Y |
| Q515,Q516 | 2211353 | | 2SA949-O |
| Q513,Q514 | 2211634 or | | 2SC2229-Y |
| Q517,Q518 | 2211633 | | 2SC2229-O |
| Q521,Q522 | 2203010 | | 2SC5171 |
| Q523,Q524 | 2203000 | | 2SA1930 |
| Q525,Q526 | 2202822 or | * | 2SC5200-R or |
| | 2202823 | * | 2SC5200-O <D> |
| Q525,Q526 | 2201653, | * | 2SC3856-O, |
| | 2201655, | * | 2SC3856-P, |
| | 2201654, | * | 2SC3856-Y, |
| | 2202842 or | * | 2SC5242-R or |
| | 2202843 | * | 2SC5242-O <P/T/W/A> |
| Q527,Q528 | 2202812 or | * | 2SA1943-R or |
| | 2202813 | * | 2SA1943-O <D> |
| Q527,Q528 | 2201663, | * | 2SA1492-O, |
| | 2201665, | * | 2SA1492-P, |
| | 2201664, | * | 2SA1492-Y, |
| | 2202832 or | * | 2SA1962-R or |
| | 2202833 | * | 2SA1962-O <P/T/W/A> |
| Q531,Q532 | 2212654 or | | 2SC3421-Y or |
| | 2212653 | | 2SC3421-O |
| Q581 | 2211793 or | | 2SA992-E or |
| | 2211792 | | 2SA992-F |
| Q584,Q585 | 2213650, | | DTD113ZS |
| | **Diodes** | | |
| D581 | 224470512 | | MTZJ5.1B |
| D582,D583 | 223163 or | | 1SS133 or |
| | 223205 | | 1SS270A |
| D961 | 22380038 or | | RBV602 or |
| | 22380274 | | RS603M |
| D962,D963 | 22380260, | | RL1N4003, |
| | 22380032 or | | 1SR139-100 or |
| | 22380035 | | GP104003E |
| | **Coils** | | |
| L1501 | 231176S | | S-1.3C <P/W/T/A> |
| L501,L502 | 231176S | | S-1.3C <P/W/T/A> |
| | Capacitors | | |
| C1501 | 354742209 | | 22 μ F,16V,Elect. |
| C1504 | 354742219 | | 220 μ F,16V,Elect. |
| C1505 | 354744709 | | 47 μ F,16V,Elect. |
| C1509,C1511 | 354781009 | | 10 μ F,50V,Elect. |
| C1512 | 374721044 | | 0.1 μ F ± 5%,50V,Plastic |
| C1515,C1516 | 354772209S | | 22 μ F,63V,Elect. |
| C501,C502 | 354742209 | | 22 μ F,16V,Elect. |
| C507,C508 | 354742219 | | 220 μ F,16V,Elect. |
| C509,C510 | 354744709 | | 47 μ F,16V,Elect. |
| C517,C518 | 354781009 | | 10 μ F,50V,Elect. |
| C521,C522 | 354781009 | | 10 μ F,50V,Elect. |
| C523,C524 | 374721044 | | 0.1 μ F ± 5%,50V,Plastic |
| C529,C530 | 354772209S | | 22 μ F,63V,Elect. |
| C582 | 354742219 | | 220 μ F,16V,Elect. |
| C962,C963 | 374731044 | | 0.1 μ F ± 5%,50V,Plastic |
| C964,C965 | 3504309 | | 12000 μ F,63V,Elect. |
| C964,C965 | 3504313 | | 12000 μ F,63V,Elect. |
| C966,C967 | 354774719S | | 470 μ F,63V,Elect. |

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| | **Resistors** | | |
| R1512 | 443526804 | ⚠ | 68Ω ± 5%,1/2W, Metal oxide |
| R1513,R1514 | 443525604 | ⚠ | 56Ω ± 5%,1/2W, Metal oxide |
| R1515,R1516 | 443526804 | ⚠ | 68Ω ± 5%,1/2W, Metal oxide |
| R1519 | 5210288 | | N06HR2.2KBE,Trimming |
| R1522 | 443521514 | | 150Ω ± 5%,1/2W, Metal oxide |
| R1523,R1524 | 453530224 | | 2.2Ω ± 5%,1/2W, Metal |
| R1525 | 4000132 | | RGC55 0.22,Thermistor |
| R1528 | 453630824 | | 8.2Ω ± 5%,1W, Metal |
| R523,R524 | 443526804 | ⚠ | 68Ω ± 5%,1/2W, Metal oxide |
| R525-R528 | 443525604 | ⚠ | 56Ω ± 5%,1/2W, Metal oxide |
| R529-R532 | 443526804 | ⚠ | 68Ω ± 5%,1/2W, Metal oxide |
| R537,R538 | 5210288 | | N06HR2.2KBE,Trimming |
| R543,R544 | 443521514 | | 150Ω ± 5%,1/2W, Metal oxide |
| R545-R548 | 453530224 | | 2.2Ω ± 5%,1/2W, Metal |
| R549,R550 | 4000132 | | RGC55 0.22,Thermistor |
| R555,R556 | 453630824 | | 8.2Ω ± 5%,1W, Metal |
| R571,R572 | 443623914 | | 390Ω ± 5%,1W, Metal oxide |
| R962,R963 | 453530224 | ⚠ | 2.2Ω ± 5%,1/2W, Metal |
| | **Sockets** | | |
| JL501a,JL501b | 25051109 | | NSCT-5P896 |
| JL502a,JL502b | 25051088 | | NSCT-4P875 |
| JL503a,JL921b | 25051110 | | NSCT-6P897 |
| JL551a | 25051109 | | NSCT-5P896 |
| JL571b | 25050267 | | NSCT-3P95 |
| | **Plugs** | | |
| JL602b | 25055627 | | NPLG-6P589 |
| JL971b | 25055627 | | NPLG-6P589 |
| P1501 | 25055038 | | NPLG-2P29 |
| P501,P502 | 25055038 | | NPLG-2P29 |
| P551a | 25055135 | | NPLG-5P119 |
| | **Relaies** | | |
| RL581,RL582 | 25065517 or | | NRL-2P5A-DC24-098 or |
| | 25065510 | | NRL-2P5A-DC24-095 |

**SECONDARY CIRCUIT PC BOARD (NAETC-6110-3A/3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| F915,F916 | 252166 | ⚠ | 6.3A-UL/T-237,Fuse <D> |
| | 252079 | ⚠ | 6.3A-SE-EAK,Fuse <P/T/W/A> |
| F915a,F916a | 25050065 | ⚠ | YSH403T,Fuseholder |
| JL921a | 25051110 | | NSCT-6P897,Socket |
| JL922b | 25050286 | | NSCT-9P114,Socket |
| R941-943 | 453532294 | | 0.22Ω ± 5%,1/2W, Metal resistor |

**VIDEO 4 TERMINAL PC BOARD(NAETC-6112-3A/3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| P241 | 2009990433UL | NSAS-10P0577, Socket<P/W/T/A> |
| P242 | 25051961 | NSCT-4P1748,Socket |
| P243 | 2009990281 | NSAS-4P0409,Socket <D> |
| P296 | 25045405 | NPJ-3PDBL230,Terminal |

**PRIMARY CIRCUIT PC BOARD(NAPS-6113-3A/3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Transistor** | |
| Q951 | 2213284 or | 2SC1740S-R or |
| | **Diodes** | |
| D951-D954 | 22380035 | GP104003E |
| | 22380032 or | 1SR139-100 or |
| | 22380260, | RL1N4003, |
| D955 | 223163 or | 1SS133 or |
| | 223205 | 1SS270A |

**NOTE: THE COMPONENTS IDENTIFIDE BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| | **Transfomer** | | |
| T902 | 2300670A | ⚠ | NPT-1111D <D> |
| | 2300671A | ⚠ | NPT-1111P <P/T/A> |
| | 2300672 | ⚠ | NPT-1111DG <W> |
| | **Capacitors** | | |
| C901 | 3500191 | ⚠ | DE7150F-103M |
| C952 | 354742219 | | 220μF,16V,Elect. |
| | **Resistors** | | |
| R901 | 431533355 | ⚠ | 3.3MΩ,1/2W,Solid <D> |
| R951 | 453530824 | | 8.2Ω±5%,1/2W, Metal |
| | **Fuseholders** | | |
| F901a | 25050065 | ⚠ | YSH403T <D/W> |
| F902a | 25050065 | ⚠ | YSH403T <PT/W/A> |
| F903a | 25050065 | ⚠ | YSH403T <P> |
| | **Fuses** | | |
| F901 | 252198 | ⚠ | 8A-UL <D/W> |
| F902 | 252077 | ⚠ | 4A-SE-EAK <P/T/W/A> |
| F903 | 252075 | ⚠ | 2.5A-SE-EAK <P> |
| | 252074 | ⚠ | 2A-SE-EAK <T/A> |
| | **Sockets** | | |
| JL942a | 25051087 | | NSCT-3P874 |
| | **Plug** | | |
| P901a | 25055675 | | NPLG-2P631 |
| | **Relay** | | |
| RL901 | 25065516 or | ⚠ | NRL-1P5A-DC12-096 or |
| | 25065248 | ⚠ | NRL-1P15A-DC12-29 <D> |
| | 25065515 or | ⚠ | NRL-1P10A-DC12-097 or |
| | 25065508 | ⚠ | NRL-1P10A-DC12-093 <P/T/W/A> |
| | **Switch** | | |
| S901 | 25065437 | | NSS-22157P <W/T> |

**FRONT/CENTER SPEAKER TERMINAL PC BOARD (NAETC-6115-3A/3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C1541 | 374721034 | 0.01μF±5%,50V,Plastic capacitor <P/T/W/A> |
| C541,C542 | 374721034 | 0.01μF±5%,50V,Plastic capacitor <P/T/W/A> |
| JL503b | 25051110 | NSCT-6P897,Socket |
| P541 | 25060246 | NTM-4PDMN166,Terminal |
| P542 | 25060247 | NTM-2PDMN167,Terminal |

**AC OUTLET TERMINAL PC BOARD(NAETC-6116-3B/3C/3D)**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| P904 | 25051125 | ⚠ | NSCT-4P912,Terminal <P/T/W> |

**POWER SWITCH PC BOARD(NASW-6117-3B/3C/3D/3F)**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| C931a | 27301216 | ⚠ | Cover,capacitor <P/T/W/A> |
| C931 | 3500191 | ⚠ | DE7150F-103M, Capacitor IS <P/T/W/A> |
| S931 | 25035550 | ⚠ | NPS-111-L512P,Push switch <P/T/W/A> |

**AC OUTLET TERMINAL PC BOARD(NAETC-6118-3A)**

| CIRCUIT NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| P902 | 25051639 | ⚠ | NSCT-4P1426,Terminal <D> |

**TONE VOLUME PC BOARD(NAAF-6103-3A/3B/3C)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C395,C396 | 374721534 | 0.015μF±5%,50V,Plastic capacitor |
| JL391a | 25051091 | NSCT-7P878,Socket |
| R395,R396 | 5104356 | N14RLC100KWT20Z,Variable resistor |

**PREOUT/MAIN IN TERMINAL PC BOARD (NAETC-6102-3A/3B/3C)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C1414 | 374723344 | 0.33μF±5%,50V,Plastic capacitor |
| JL401b | 25051087 | NSCT-3P874,Socket |
| JL402a | 25051093 | NSCT-9P880,Socket |
| JL551b | 25050269 | NSCT-5P97,Socket |
| JL603b | 25055628 | NPLG-7P590,Plug |
| P1401 | 25045458 or | NPJ-6PDBL279 or |
| | 25045300 | NPJ-6PDBL159,Terminal |
| P1402,P1404 | 25045298 or | NPJ-2PDBL157 or |
| | 25045456 | NPJ-2PDBL277,terminal |
| P1403 | 25045460 or | NPJ-4PDBL281 or |
| | 25045303 | NPJ-4PDBL162,Terminal |

**MR/RI TERMINAL PC BOARD(NAETC-6096-3A/3B/3C/3D)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Transistors** | |
| Q981,Q982 | 221282 or | DTC144ES or |
| | 2213560 | RN1204 |
| Q983 | 24120043 | ON3131 <D> |
| Q984 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 <D> |
| Q985 | 2213284 or | 2SC1740S-R or |
| | 2212115 | 2SC2458-GR <D> |
| | **Diodes** | |
| D981,D982 | 223163 or | 1SS133 or |
| | 223205 | 1SS270A <P/T/W/K/A> |
| D983 | 223163 or | 1SS133 or |
| | 223205 | 1SS270A |
| D984 | 223163 or | 1SS133 or |
| | 223205 | 1SS270A <D> |
| | **Capacitors** | |
| C981 | 374724724 | 4700pF±5%,50V,Plastic |
| C982 | 353741009 | 10μF,16V,Elect. |
| C983 | 353741009 | 10μF,16V,Elect. <D> |
| | **Socket** | |
| JL242a | 25051093 | NSCT-9P880 |
| | **Plugs** | |
| JL942b | 25055624 | NPLG-3P586 |
| JL972b | 25055627 | NPLG-6P589 |
| | **Terminals** | |
| P981 | 25045293 | HSJ1003-01-012 <P/T/W/A/K> |
| | 25045433 | HSJ1003-01-013 <D> |
| P982 | 25045330 or | NPJ-2PDBL184 or |
| | 25045481 | NPJ-2PDBL299 |
| JL391b | 25055628 | NPLG-7P590 |

**SURROUND POWER AMPLIFIER PC BOARD (NAAF-6097-3A/3B/3C/3D)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Transistors** | |
| Q601-Q606 | 2211733 or | 2SC1845-E |
| | 2211732 | 2SC1845-F |
| Q607,Q608 | 2213284 or | 2SC1740S-R or |
| | 2212115 | 2SC2458-GR |
| Q609-Q612 | 2211354 or | 2SA949-Y |
| | 2211353 | 2SA949-O |
| Q613,Q614 | 2211634 or | 2SC2229-Y |
| | 2211633 | 2SC2229-O |
| Q615,Q616 | 2211354 or | 2SA949-Y |
| | 2211353 | 2SA949-O |
| Q617,Q618 | 2211634 or | 2SC2229-Y |
| | 2211633 | 2SC2229-O |

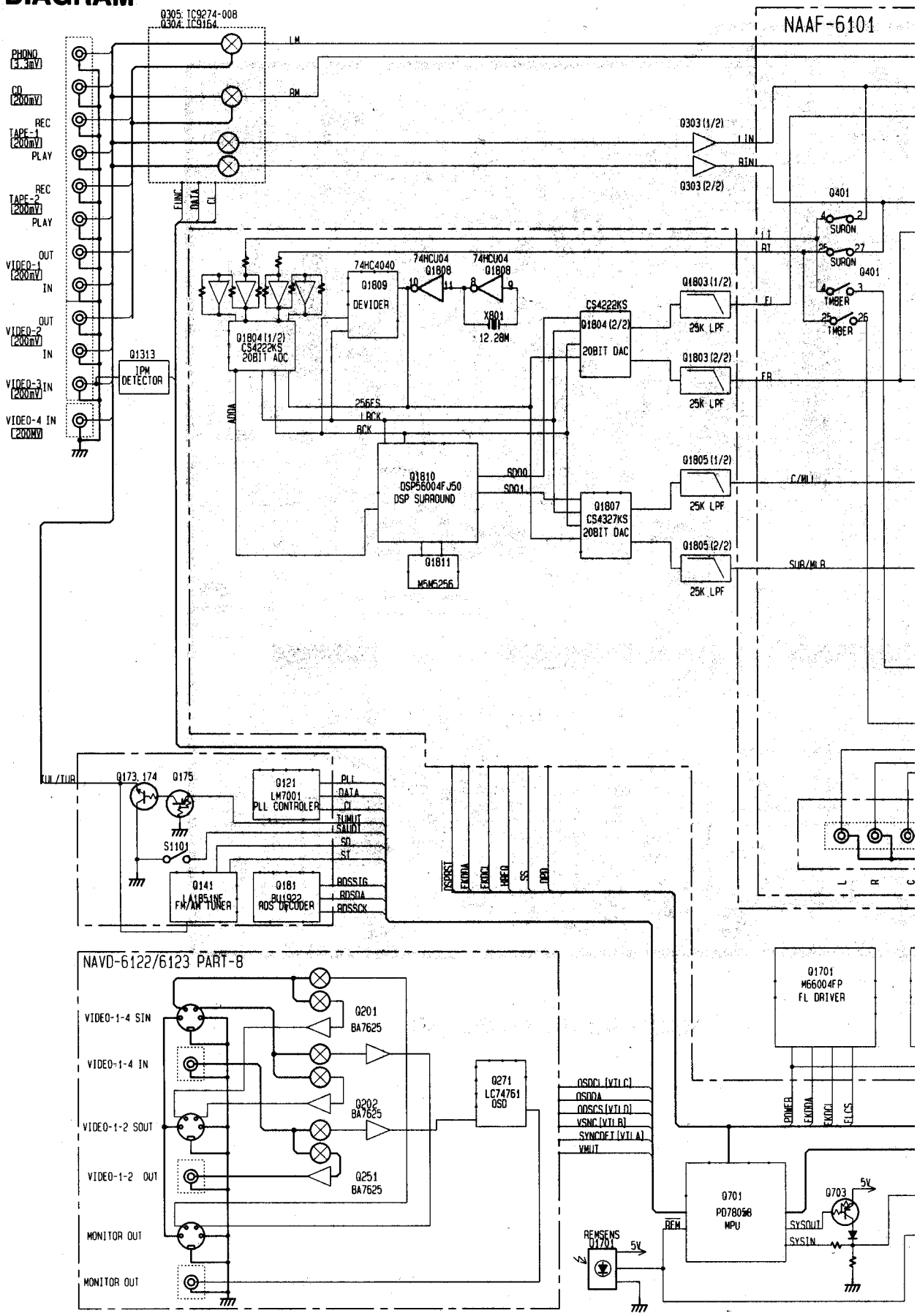
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Transistors** | |
| Q619,Q620 | 2213284 or | 2SC1740S-R or |
| | 2212115 | 2SC2458-GR |
| Q621,Q622 | 2203010 | 2SC5171 |
| Q623,Q624 | 2203000 | 2SA1930 |
| Q625,Q626 | 2202922, | * 2SC5196-R, |
| | 2202923, | * 2SC5196-O, |
| | 2202373, | * 2SC4466-O, |
| | 2202375 or | * 2SC4466-P or |
| | 2202374 | * 2SC4466-Y, Transistor |
| Q627,Q628 | 2202912, | * 2SA1939-R, |
| | 2202913, | * 2SA1939-O, |
| | 2202363, | * 2SA1693-O, |
| | 2202365 or | * 2SA1693-P or |
| | 2202364 | * 2SA1693-Y, Transistor |
| Q629,Q630 | 2211733 or | 2SC1845-E or |
| | 2211732 | 2SC1845-F |
| Q681,Q682 | 2213650 | DTD113ZS |
| | **Diodes** | |
| D601,D602 | 22380260, | RL1N4003, |
| | 22380032 or | 1SR139-100 or |
| | 22380035 | GP104003E |
| D681,D682 | 223163 or | 1SS133 or |
| D681,D682 | 223205 | 1SS270A |
| | **Coil** | |
| L601,L602 | 231176S | S-1.3C <P/T/W/A> |
| | Capacitors | |
| C601,C602 | 354742209 | 22 μ F,16V,Elect. |
| C607,C608 | 354742219 | 220 μ F,16V,Elect. |
| C609,C610 | 354744709 | 47 μ F,16V,Elect. |
| C617,C618 | 354781009 | 10 μ F,50V,Elect. |
| C623,C624 | 374721044 | 0.1 μ F ± 5%,50V,Plastic |
| C629,C630 | 354784719S | 470 μ F,50V,Elect. |
| C631 | 354781009 | 10 μ F,50V,Elect. |
| C632-C634 | 354781019 | 100 μ F,50V,Elect. |
| | **Resistors** | |
| R623,R624 | 443526804 | 68Ω ± 5%,1/2W, Metal oxide |
| R625-R628 | 443525604 | 56Ω ± 5%,1/2W, Metal oxide |
| R629-R932 | 443526804 | 68Ω ± 5%,1/2W, Metal oxide |
| R637,R638 | 5210288 | N06HR2.2KBE,Trimming |
| R643,C644 | 443521514 | 150Ω ± 5%,1/2W, Metal oxide |
| R645-R648 | 453530224 | 2.2Ω ± 5%,1/2W, Metal |
| R649,R650 | 4000131 | RGC22-0.22 OHMK,Metal plate |
| R655,R656 | 453630824 | 8.2Ω ± 5%,1W, Metal |
| R669,R670 | 453530224 | 2.2Ω ± 5%,1/2W, Metal |
| R675,R676 | 453532294 | 0.22Ω ± 5%,1/2W, Metal |
| | **Relaies** | |
| RL681,RL682 | 25065517 or | NRL-2P5A-DC24-098 or |
| | 25065510 | NRL-2P5A-DC24-095 |
| | **Sockets** | |
| JL601a | 25051110 | NSCT-6P897 |
| JL603a | 25051091 | NSCT-7P878 |
| JL691b | 25050267 | NSCT-3P95 |
| | **Plugs** | |
| P601,P602 | 25055038 | NPLG-2P29 |
| P611a | 25055133 | NPLG-3P117 |

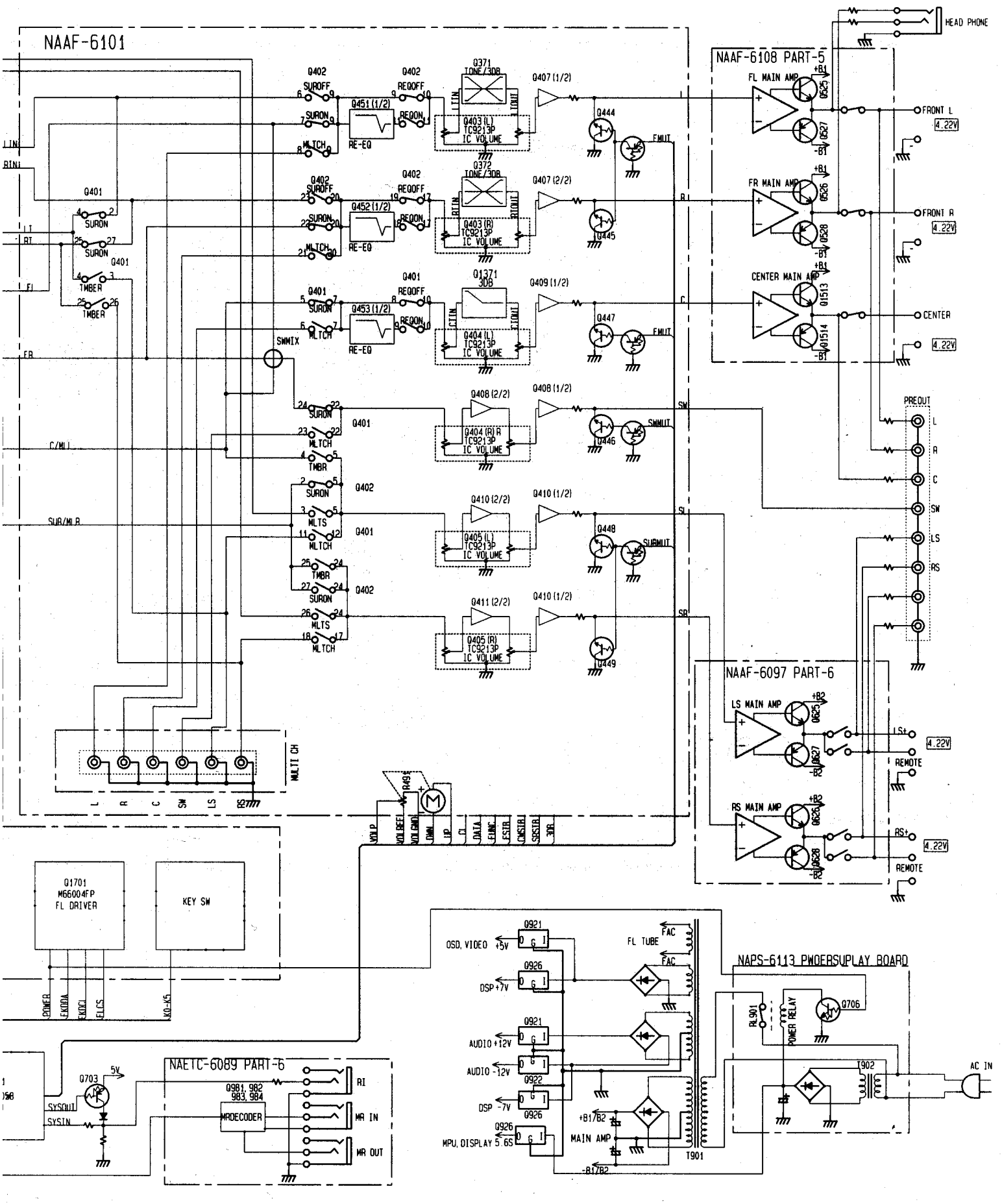
**SPEAKER TERMINAL PC BOARD(NAETC-6099-3A/3B/3C/3D)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| C651-C654 | 374721034 | 0.01 μ F ± 5%,50V,Plastic capacitor <P/T/W/A> |
| JL601c | 25051110 | NSCT-6P897,Socket |
| P651 | 25060248 | NTM-8PDMN168,Terminal |

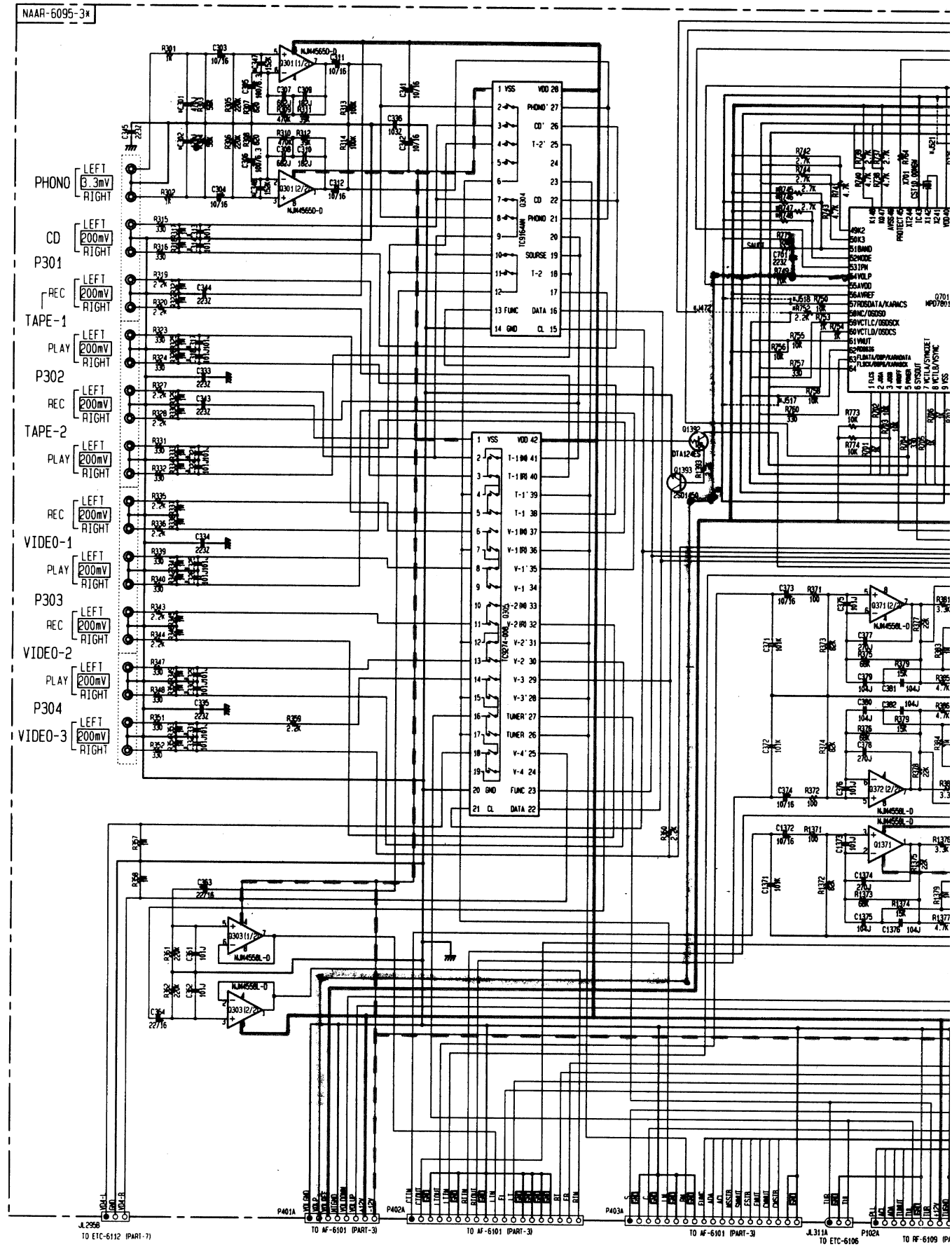
NOTE: D : 120V model only
P : European model only
T : Asian model only
W: Wolrdwide model only
A : Australian model only

# BLOCK DIAGRAM

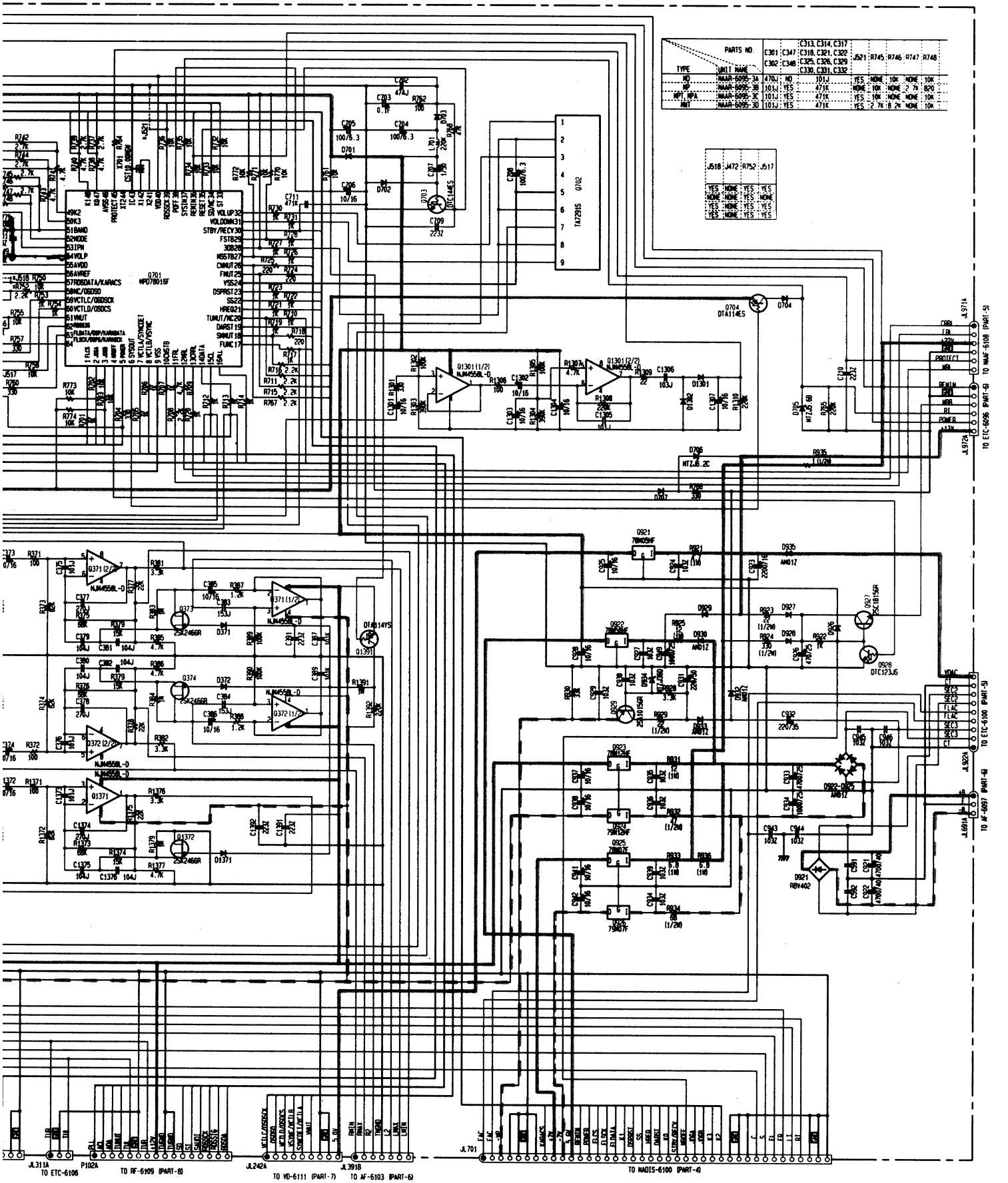



NAAF-6101
NAAF-6108 PART-5
NAAF-6097 PART-6
NAPS-6113 PWOERSUPLAY BOARD
NAETC-6089 PART-6
HEAD PHONE
FRONT L
FRONT R
CENTER
PREOUT
REMOTE
AC IN
Q1701
M66004FP
FL DRIVER
KEY SW
MULTI CH
Q401
Q402
Q403 (L)
TC9213P
IC VOLUME
Q404 (L)
Q404 (R)
Q405 (L)
Q405 (R)
Q371
Q372
Q1371
3DB
Q407 (1/2)
Q407 (2/2)
Q408 (1/2)
Q408 (2/2)
Q409 (1/2)
Q410 (1/2)
Q410 (2/2)
Q411 (1/2)
Q451 (1/2)
Q452 (1/2)
Q453 (1/2)
RE-EQ
SWMIX
SUBMIX
FMIX
SURON
SUROFF
REQON
REQOFF
MLTCH
MLTS
TMBR
TMBER
FL MAIN AMP
FR MAIN AMP
CENTER MAIN AMP
LS MAIN AMP
RS MAIN AMP
FAC
FL TUBE
OSD, VIDEO +5V
DSP +7V
AUDIO +12V
AUDIO -12V
DSP -7V
MPU, DISPLAY 5.6S
MAIN AMP
+B1/B2
-B1/B2
POWER RELAY
RL901
Q706
T901
T902
Q703
MRDECODER
RI
MR IN
MR OUT
SYSOUT
SYSIN

# SCHEMATIC DIAGRAM



D E F G

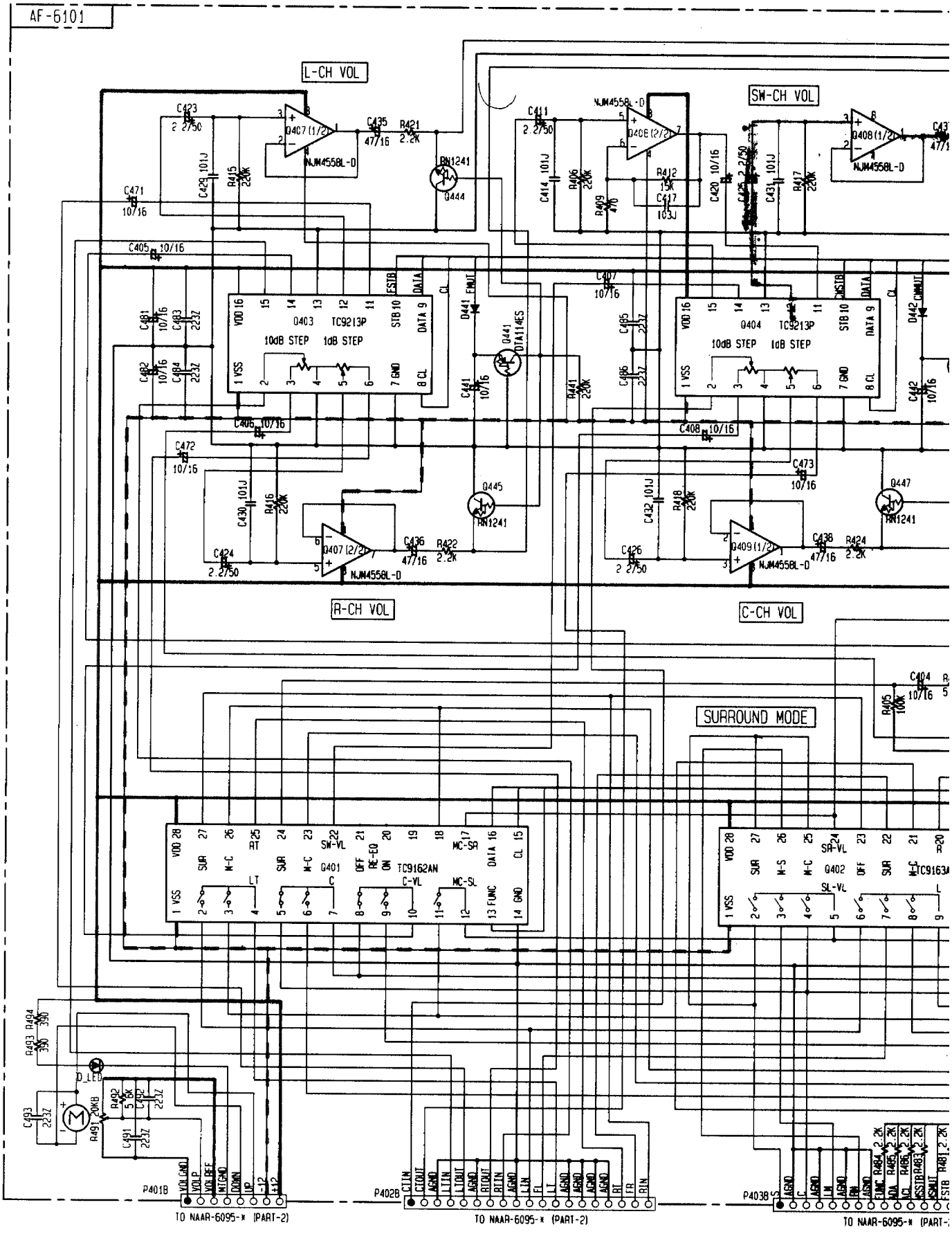

PARTS NO.
TYPE
UNIT NAME
C301 C347 C302 C348
C313, C314, C317 C318, C321, C322 C325, C326, C329 C330, C331, C332
J521 R745 R746 R747 R748
NO NAAR-5095-3A 470J NO 101J YES NONE 10K NONE 10K
NO NAAR-5095-3B 101J YES 471K NONE 10K NONE 2.7K 820
NOT, NPA NAAR-5095-3C 101J YES 471K YES 10K NONE NONE 10K
NOT NAAR-5095-3D 101J YES 471K YES 2.7K 8.2K NONE 10K
J518 J472 R752 J517
YES NONE YES YES
NONE NONE YES NONE
YES NONE YES YES
YES NONE YES YES
TA7291S
D701 MPD78016F
TO ETC-6106
TO RF-6109 (PART-8)
TO VD-6111 (PART-7)
TO AF-6103 (PART-6)
TO NADIS-6100 (PART-4)
TO MAF-6108 (PART-6)
TO ETC-6096 (PART-6)
TO ETC-6100 (PART-5)
TO AF-6097 (PART-6)

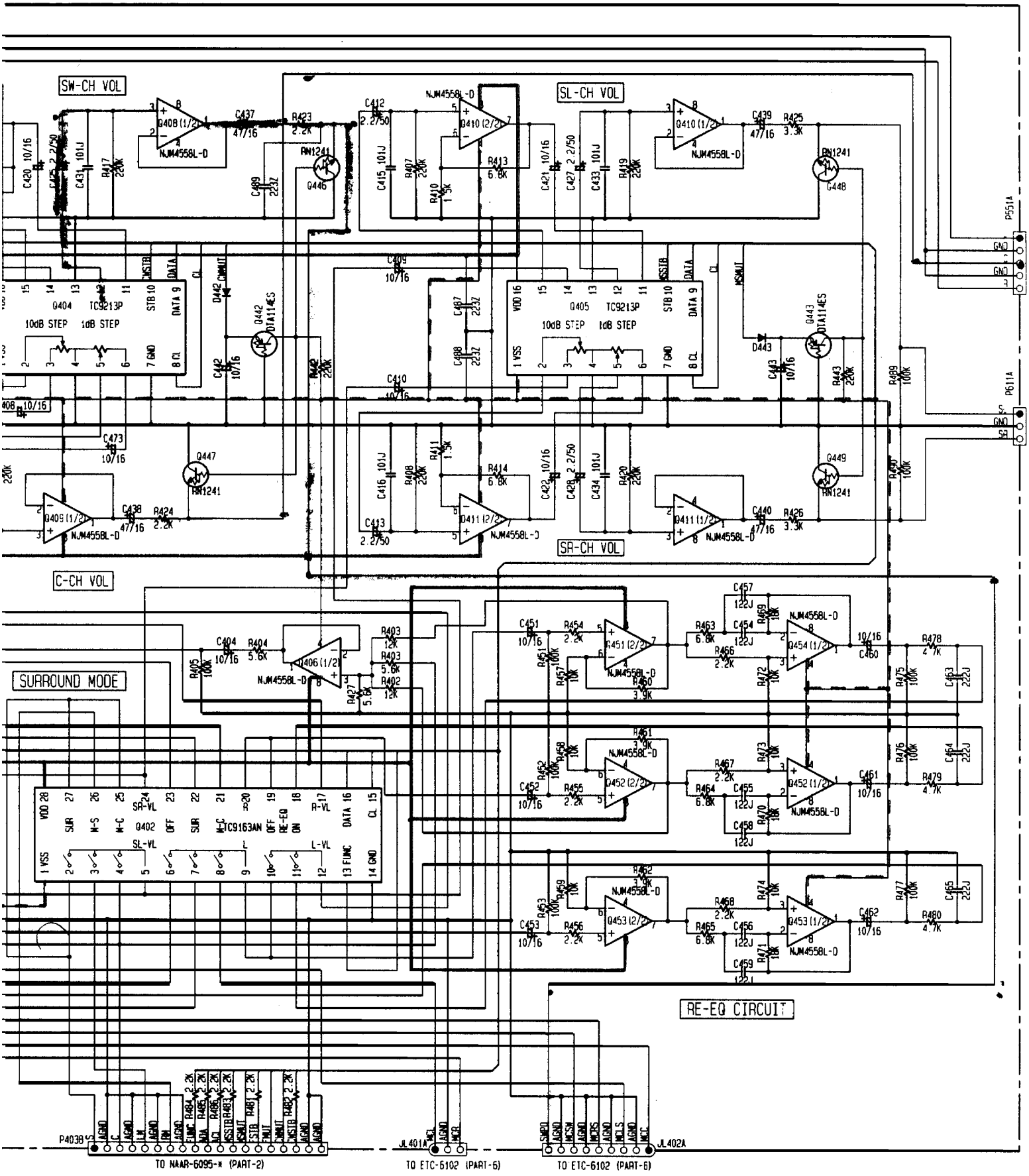
# PRINTED CIRCUIT BOARD-PARTS LIST

**ELECTRO VOLUME CIRCUIT PC BOARD(NAAF-6101-3A/3B/3C)**

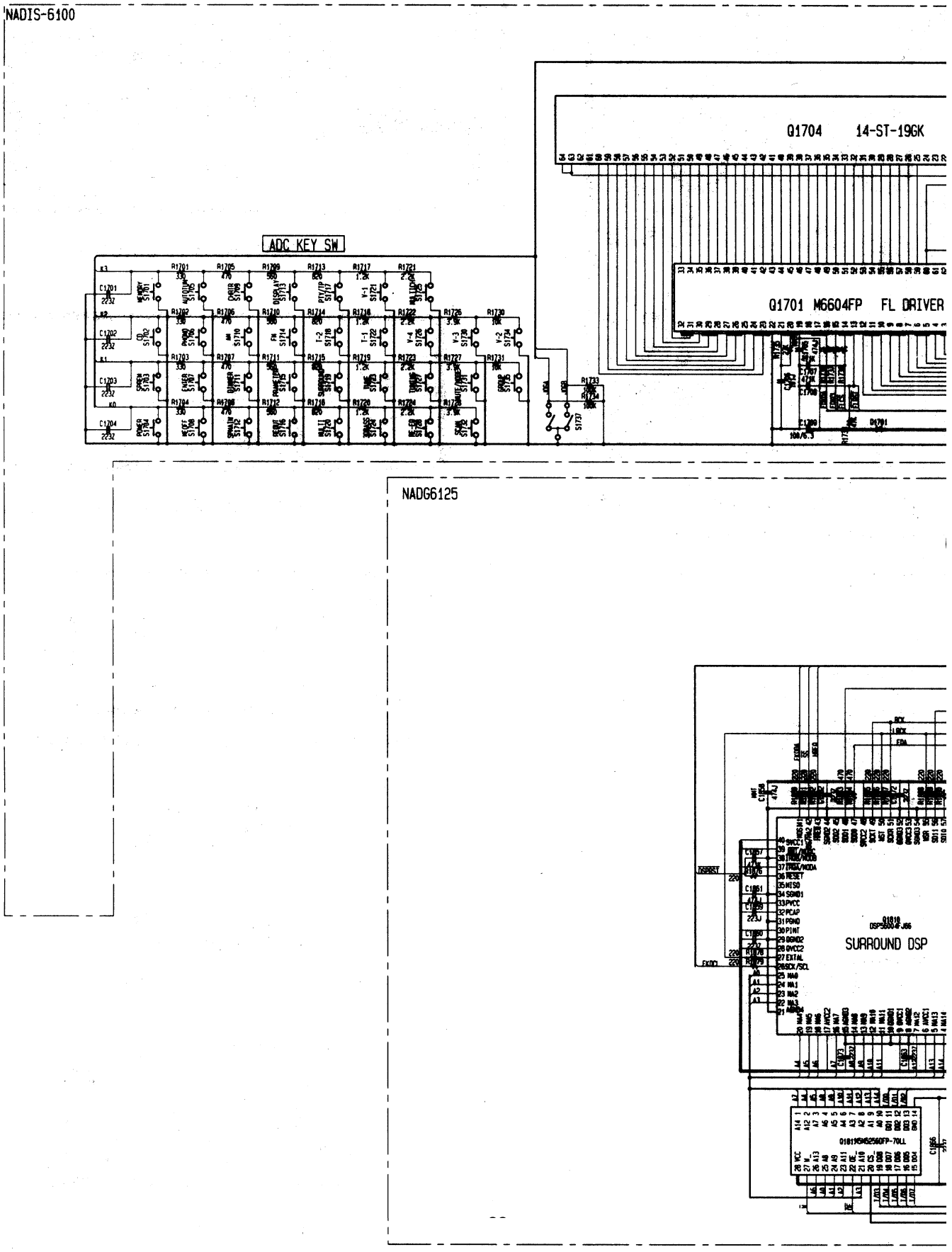
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **ICs** | |
| Q401 | 22240798 | TC9162AN |
| Q402 | 22240799 | TC9163AN |
| Q403-Q405 | 22240266 | TC9213P |
| Q406-Q411 | 22240293 or | NJM4558L-D or |
| Q451-Q453 | 22240247 | BA15218N |
| | **Transistors** | |
| Q441-Q443 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 |
| Q444-Q449 | 2213631 or | RN1241-A or |
| | 2213632 | RN1241-B |
| | **Diodes** | |
| D441-D443 | 223163 or | 1SS133 or |
| | 223205 | 1SS270A |
| | **Capacitors** | |
| C404-C410 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C411-C413 | 354780229 | 2.2 $\mu$ F,50V,Elect. |
| C417 | 374721034 | 0.01 $\mu$ F $\pm$ 5%,50V,Plastic <D> |
| C420-C422 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C423-C428 | 354780229 | 2.2 $\mu$ F,50V,Elect. |
| C435-C440 | 354744709 | 47 $\mu$ F,16V,Elect. |
| C441-C443 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C451-C453 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C454-C459 | 374721224 | 1200pF $\pm$ 5%,50V,Plastic |
| C460-C462 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C463-C465 | 374722224 | 2200pF $\pm$ 5%,50V,Plastic |
| C471-C473 | 354741009 | 10 $\mu$ F,16V,Elect. |
| C481,C482 | 354741009 | 10 $\mu$ F,16V,Elect. |
| | **Resistors** | |
| R491 | 5142017 | N16RGL20KB25F,Variable |
| | **Sockets** | |
| JL245 | 2009990449UL | NSAS-6P0600 |
| JL401a | 25051087 | NSCT-3P874 |
| JL402b | 25051093 | NSCT-9P880 |
| P401b | 25051233 | NSCT-8P1023 |
| P402b | 25051530 | NSCT-19P1317 |
| P403b | 25051530 | NSCT-19P1317 |
| P551 | 2009990466UL | NSAS-10P0620 |
| P611 | 2009990449UL | NSAS-6P0600 |

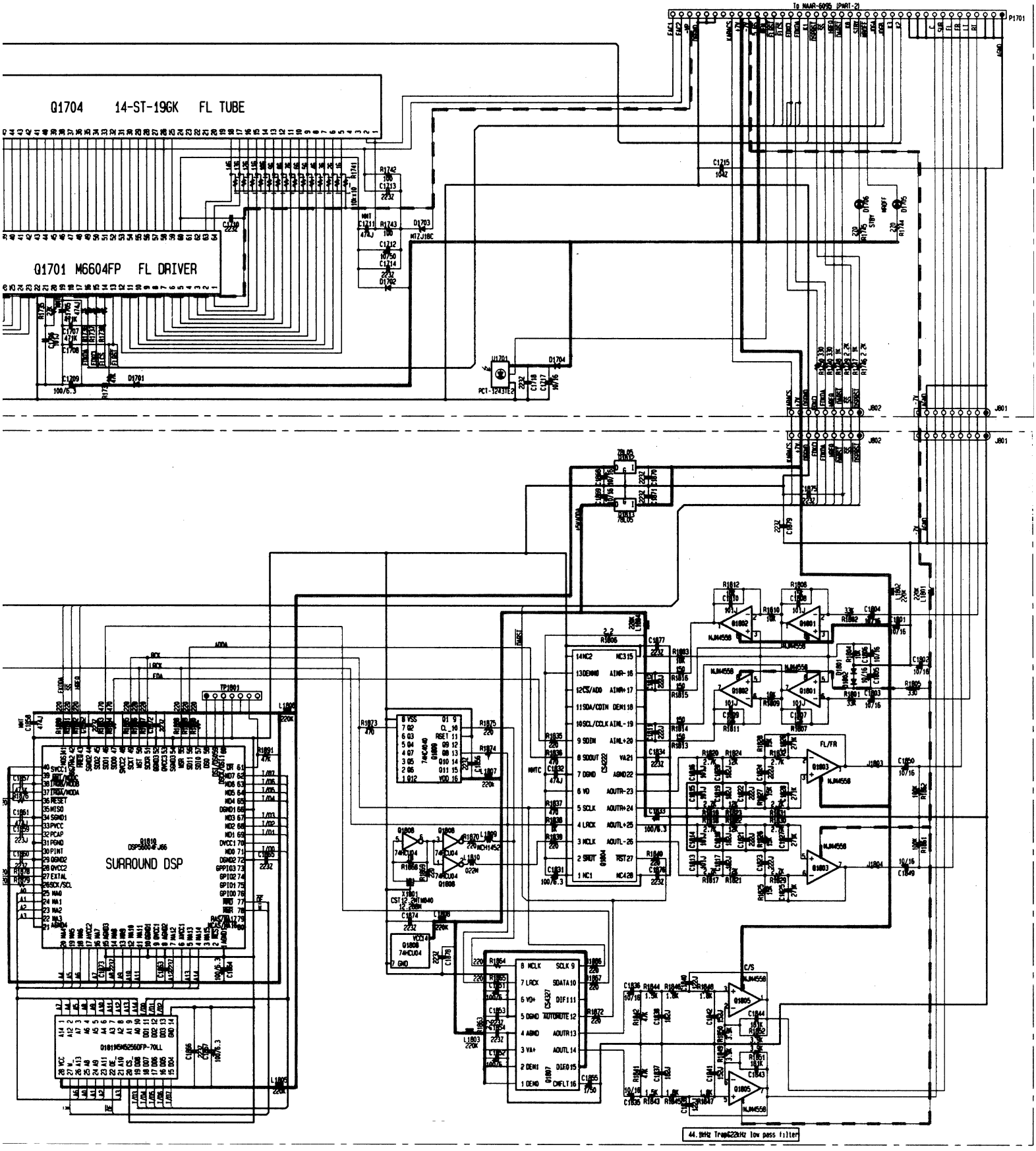
# SCHEMATIC DIAGRAM



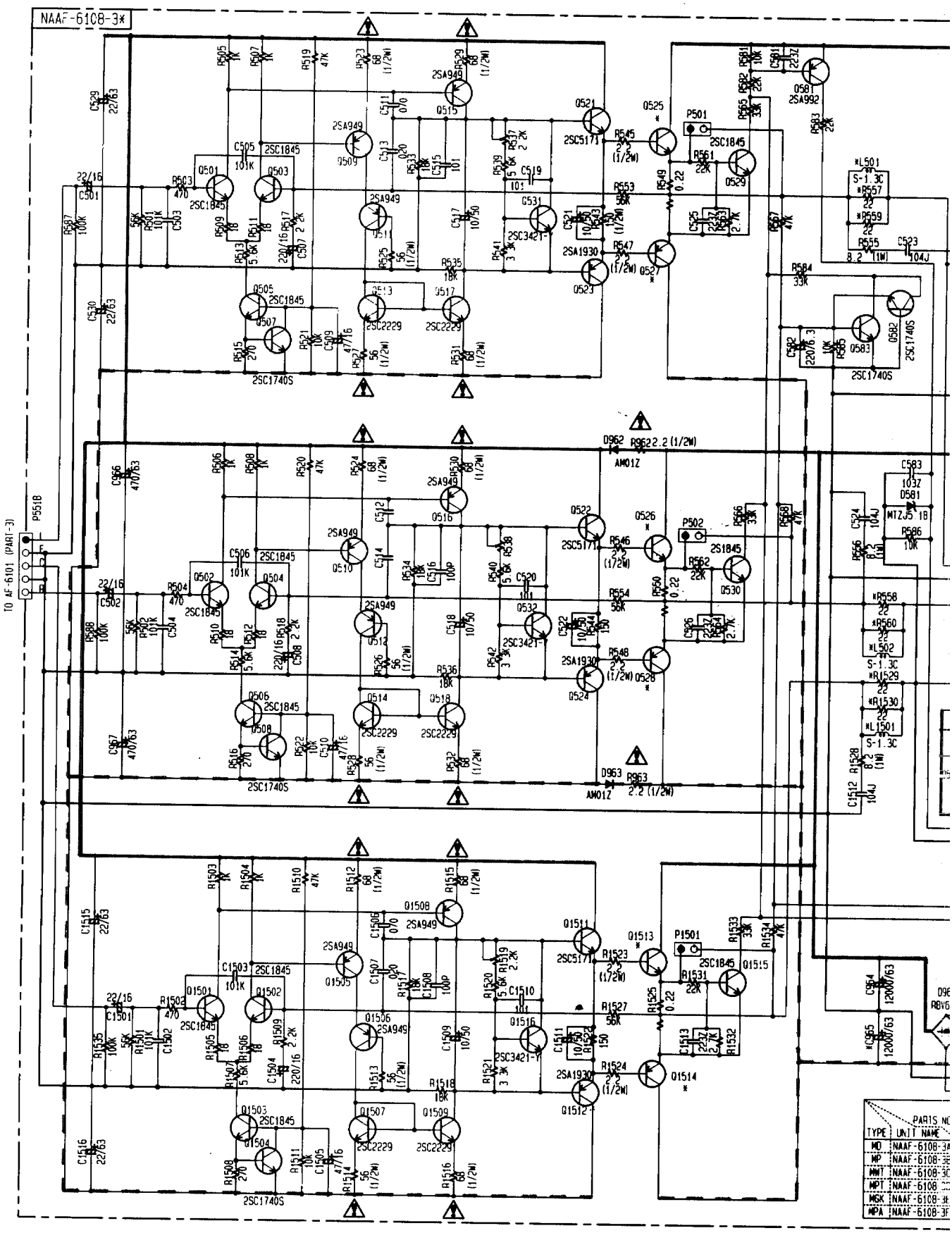

SW-CH VOL
SL-CH VOL
SR-CH VOL
C-CH VOL
SURROUND MODE
RE-EQ CIRCUIT
Q404 TC9213P
Q405 TC9213P
10dB STEP 1dB STEP
Q402 TC9163AN
NJM4558L-D
DTA114ES
RN1241
P511A
P611A
P403B
JL401A
JL402A
TO NAAF-6108-* (PART-5)
TO AF-6097 (PART-6)
TO NAAR-6095-* (PART-2)
TO ETC-6102 (PART-6)
TO ETC-6102 (PART-6)

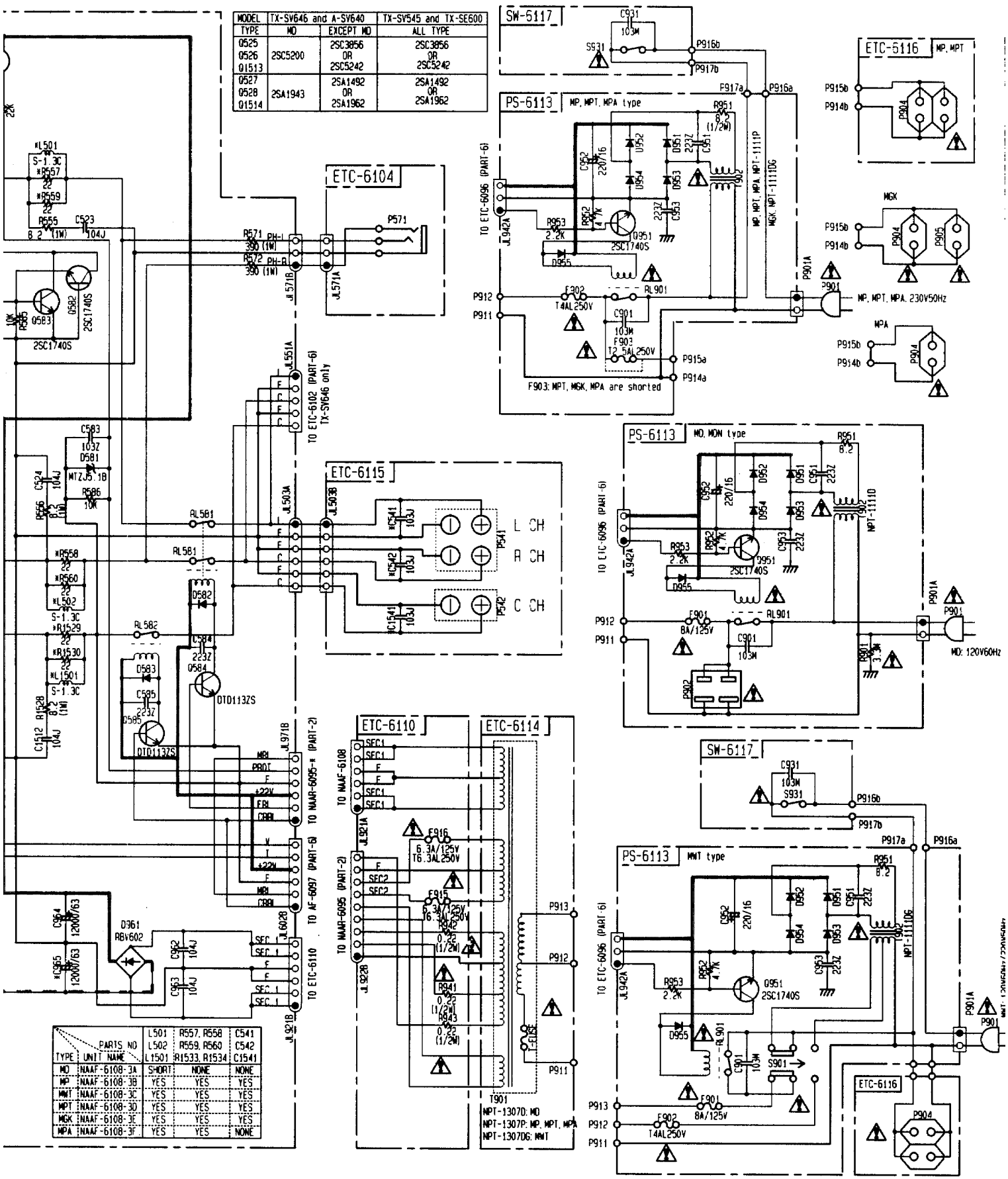
# SCHEMATIC DIAGRAM



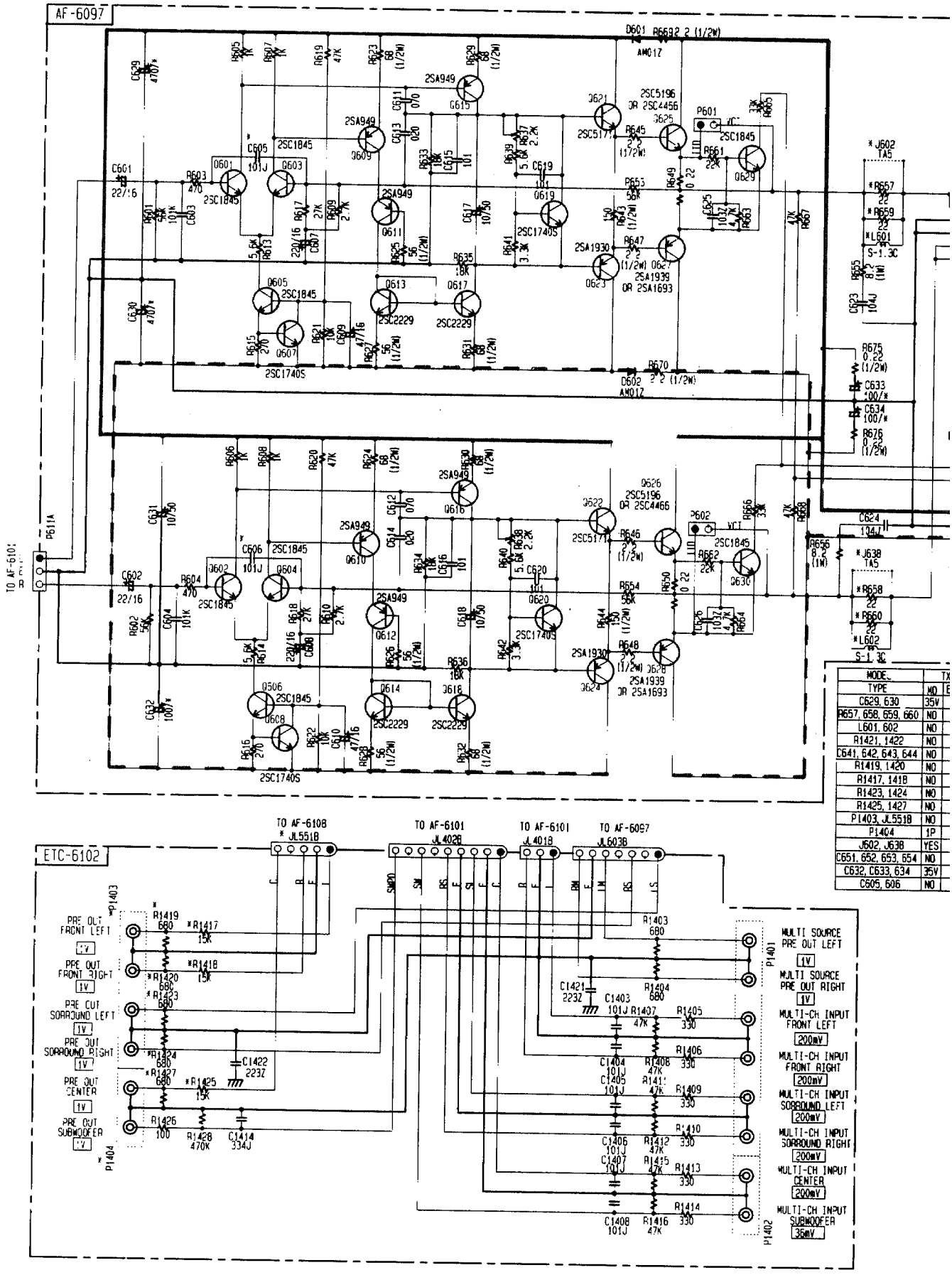

D
E
F
G
Q1704 14-ST-19GK FL TUBE
Q1701 M6604FP FL DRIVER
SURROUND DSP
44.1kHz Trap@22kHz low pass filter

# SCHEMATIC DIAGRAM

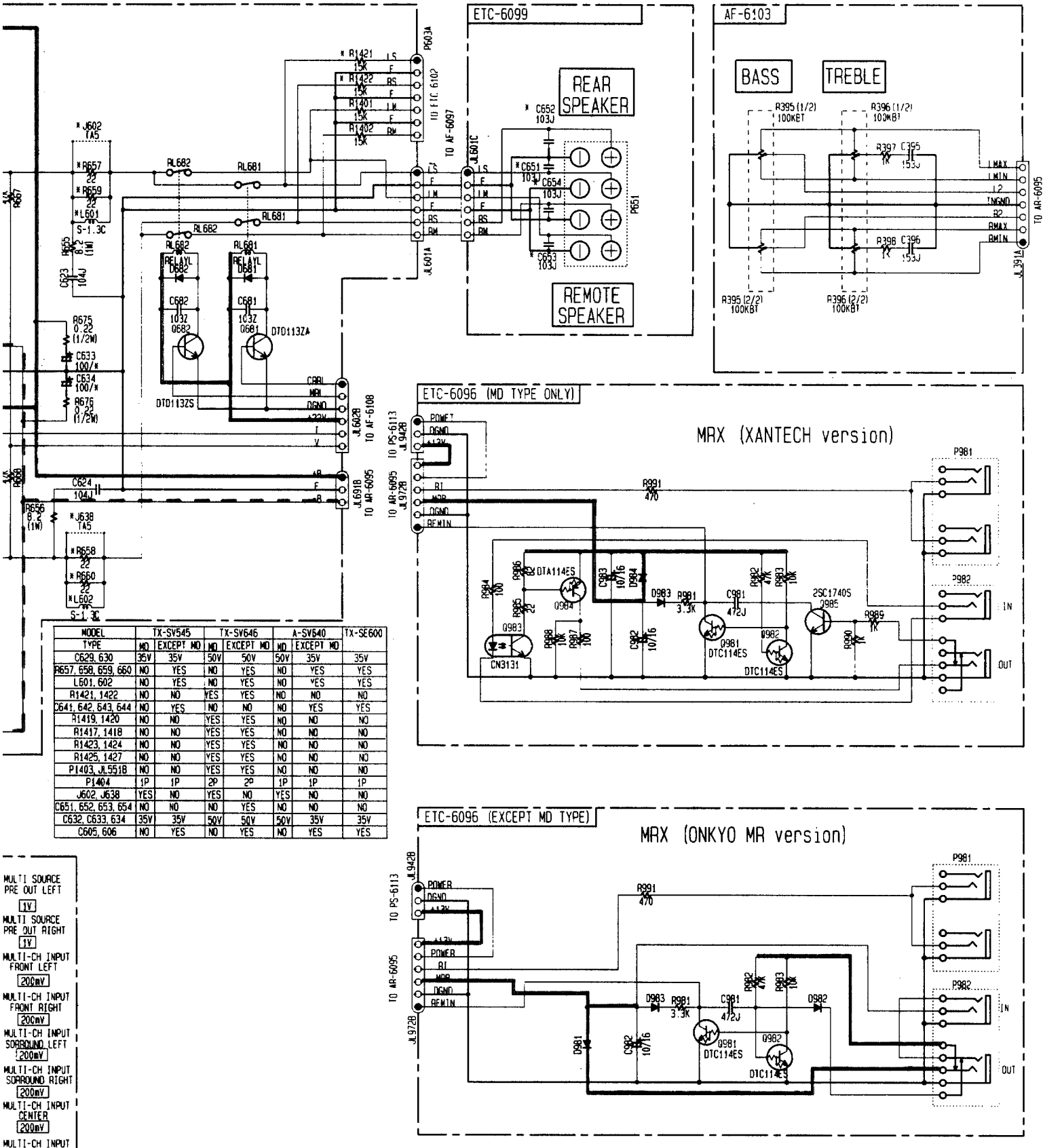



D
E
F
G
MODEL
TYPE
MD
EXCEPT MD
ALL TYPE
0525
0526
Q1513
2SC5200
2SC3856
OR
2SC5242
2SC3856
OR
2SC5242
0527
0528
Q1514
2SA1943
2SA1492
OR
2SA1962
2SA1492
OR
2SA1962
ETC-6104
ETC-6115
ETC-6110
ETC-6114
ETC-6116
SW-5117
PS-6113
MP, MPT, MPA type
MD, MDN type
MWT type
MP, MPT
MGK
MPA
L CH
R CH
C CH
TO ETC-6096 (PART-6)
TO ETC-6102 (PART-6)
TX-SV646 only
TO NAAF-6108
TO NAAR-6095-* (PART-2)
TO AF-6097 (PART-6)
TO ETC-6110
MP, MPT, MPA, 230V50Hz
MD: 120V60Hz
F903: MPT, MGK, MPA are shorted
T901
NPT-1307D: MD
NPT-1307P: MP, MPT, MPA
NPT-1307DG: MWT
PARTS NO
TYPE
UNIT NAME
L501
L502
L1501
R557, R558
R559, R560
R1533, R1534
C541
C542
C1541
MD
NAAF-6108-3A
SHORT
NONE
NONE
MP
NAAF-6108-3B
YES
YES
YES
MWT
NAAF-6108-3C
YES
YES
YES
MPT
NAAF-6108-3D
YES
YES
YES
MGK
NAAF-6108-3E
YES
YES
YES
MPA
NAAF-6108-3F
YES
YES
NONE

# SCHEMATIC DIAGRAM




| MODE. | TX |
|---|---|
| TYPE | NO |
| C629, 630 | 35V |
| R657, 658, 659, 660 | NO |
| L601, 602 | NO |
| R1421, 1422 | NO |
| C641, 642, 643, 644 | NO |
| R1419, 1420 | NO |
| R1417, 1418 | NO |
| R1423, 1424 | NO |
| R1425, 1427 | NO |
| P1403, JL551B | NO |
| P1404 | 1P |
| J602, J638 | YES |
| C651, 652, 653, 654 | NO |
| C632, C633, 634 | 35V |
| C605, 606 | NO |




| MODEL | TX-SV545 | | TX-SV646 | | A-SV640 | | TX-SE600 |
|---|---|---|---|---|---|---|---|
| TYPE | MD | EXCEPT MD | MD | EXCEPT MD | MD | EXCEPT MD | |
| C629, 630 | 35V | 35V | 50V | 50V | 50V | 35V | 35V |
| R657, 658, 659, 660 | NO | YES | NO | YES | NO | YES | YES |
| L601, 602 | NO | YES | NO | YES | NO | YES | YES |
| R1421, 1422 | NO | NO | YES | YES | NO | NO | NO |
| C641, 642, 643, 644 | NO | YES | NO | NO | NO | YES | YES |
| R1419, 1420 | NO | NO | YES | YES | NO | NO | NO |
| R1417, 1418 | NO | NO | YES | YES | NO | NO | NO |
| R1423, 1424 | NO | NO | YES | YES | NO | NO | NO |
| R1425, 1427 | NO | NO | YES | YES | NO | NO | NO |
| P1403, JL5518 | NO | NO | YES | YES | NO | NO | NO |
| P1404 | 1P | 1P | 2P | 2P | 1P | 1P | 1P |
| J602, J638 | YES | NO | YES | NO | YES | NO | NO |
| C651, 652, 653, 654 | NO | NO | NO | YES | NO | NO | NO |
| C632, C633, 634 | 35V | 35V | 50V | 50V | 50V | 35V | 35V |
| C605, 606 | NO | YES | NO | YES | NO | YES | YES |

MULTI SOURCE PRE OUT LEFT 1V
MULTI SOURCE PRE OUT RIGHT 1V
MULTI-CH INPUT FRONT LEFT 200mV
MULTI-CH INPUT FRONT RIGHT 200mV
MULTI-CH INPUT SORROUND LEFT 200mV
MULTI-CH INPUT SORROUND RIGHT 200mV
MULTI-CH INPUT CENTER 200mV
MULTI-CH INPUT SUBWOOFER 36mV

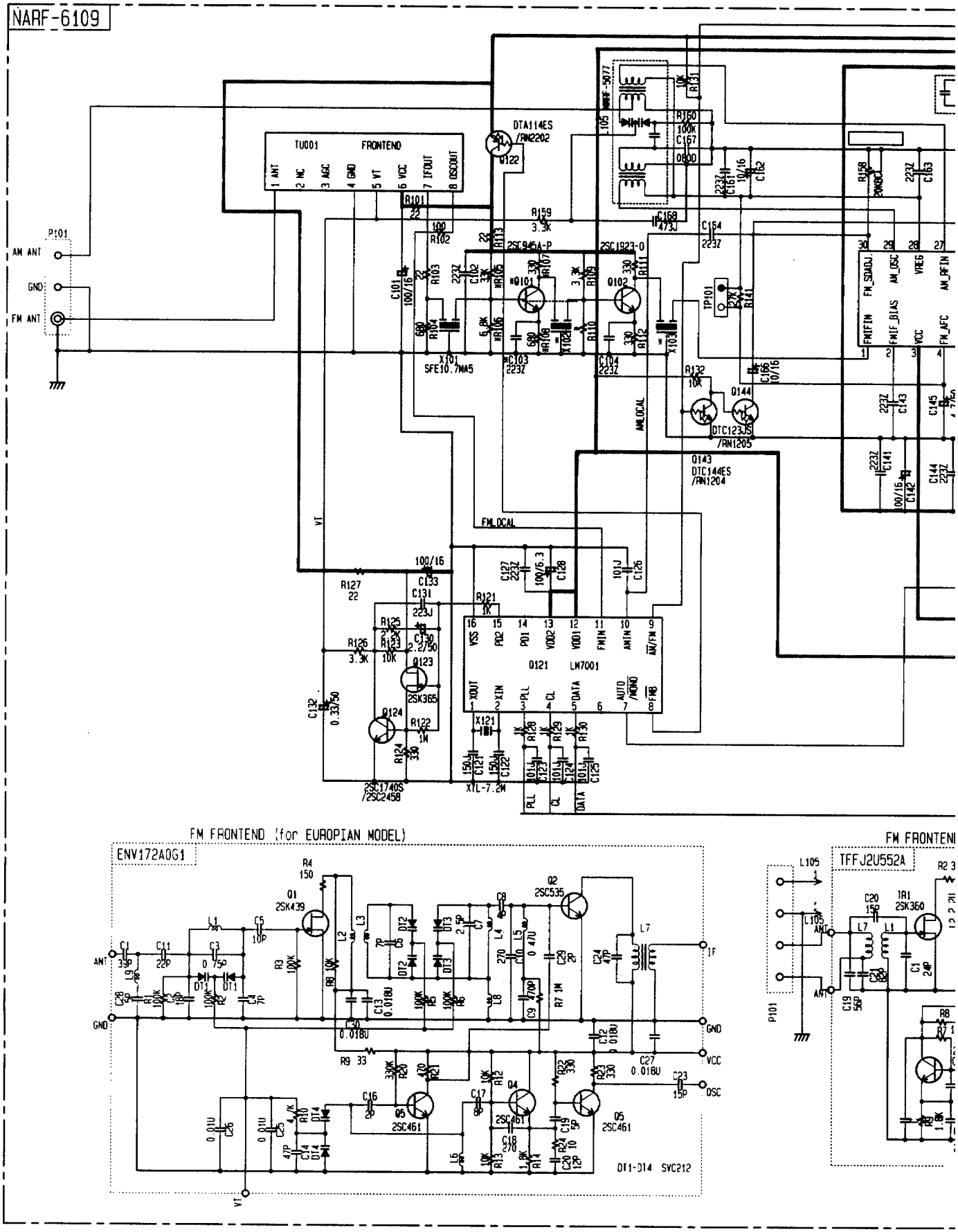
# PRINTED CIRCUIT BOARD-PARTS LIST

**TUNER CIRCUIT PC BOARD(NARF-6109-3A/3B/3C/3D/3F)**

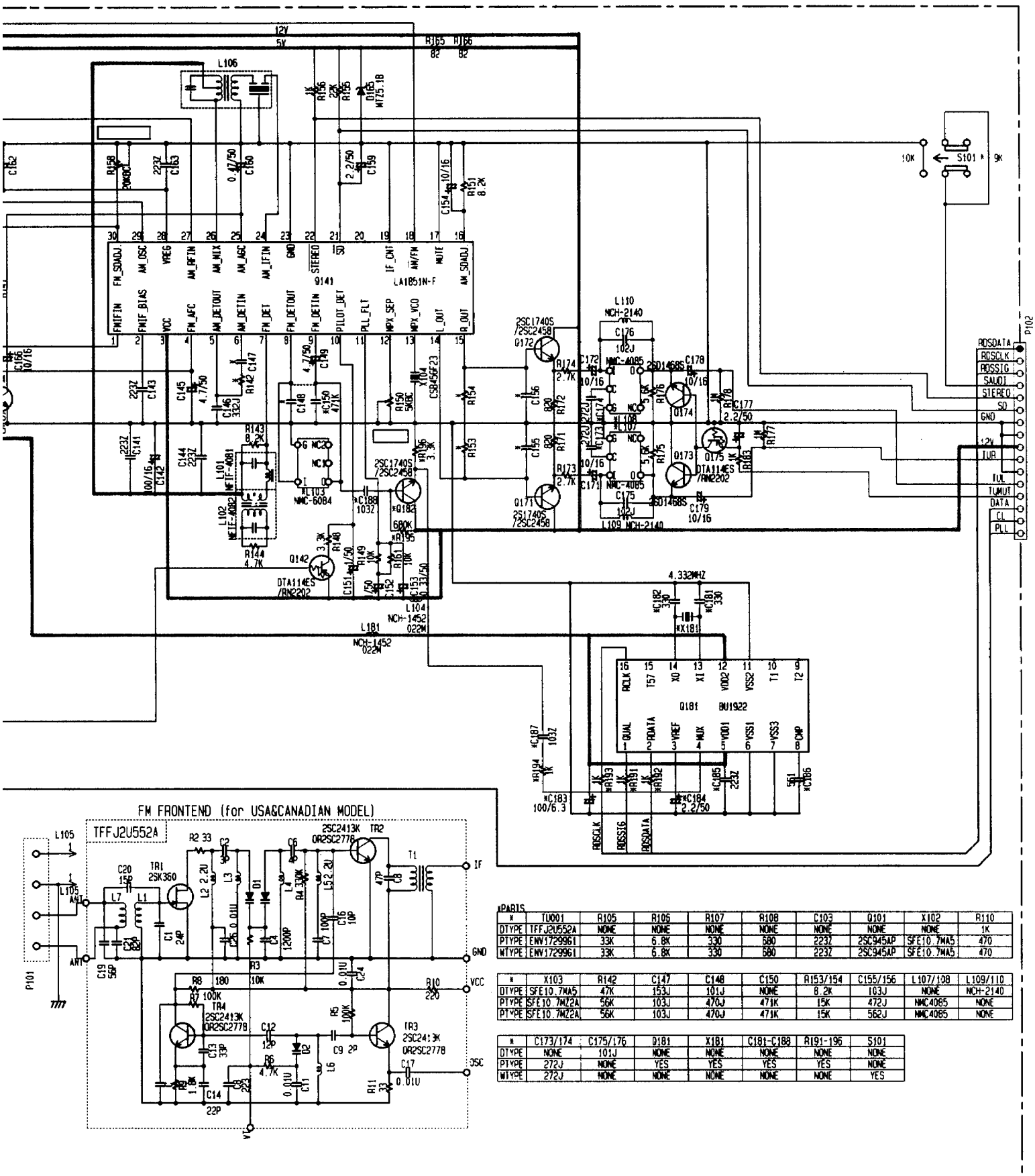
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Front end** | |
| TU001 | 240099 | ENV172A0G1 <P/T/W/A> |
| | 240107 | TFFJ2U552A <D> |
| | **ICs** | |
| Q121 | 22241076 or | LM7001J or |
| | 22240090 | LM7001 |
| Q141 | 22240983 | LA1851N-F |
| Q181 | 22241124 | BU1922 <P> |
| | **Transistors** | |
| Q101 | 2210746 | 2SC945A-P <P/W/T/A> |
| Q102 | 2211723 | 2SC1923-O |
| Q122,Q142 | 2213510 or | DTA114ES or |
| Q122,Q142 | 2214350 | RN2202 |
| Q123 | 2212445 | 2SK365-GR |
| Q124 | 2213284 or | 2SC1740S-R or |
| Q171,Q172 | 2212115 | 2SC2458-GR |
| Q143 | 221282 or | DTC144ES or |
| | 2213560 | RN1204 |
| Q144 | 2213640 or | DTC123JS or |
| | 2214660 | RN1205 |
| Q173,Q174 | 2215024 | 2SD1468S-R |
| Q175 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 |
| Q182 | 2213284 or | 2SC1740S-R or |
| | 2212115 | 2SC2458-GR <P> |
| | **Diodes** | |
| D165 | 224470512 | MTZJ5.1B |
| | Transformers and coils | |
| L101 | 233457 | NFIF-4081 |
| L102 | 233458 | NFIF-4082 |
| L103 | 233501 | NMC-3088 <P/T/W/A> |
| L104 | 233454M022 | NCH-1452 022M |
| L105 | 232174 | NMRF-5077 |
| L106 | 232176 | NMIF-6094 |
| L107,L108 | 233484 | NMC-4085 <P/T/W/A> |
| L109,L110 | 231092 | NCH-2140 <D> |
| L181 | 233454K220 | NCH-1452 220K <P> |
| | **Cermaic filters** | |
| X101 | 3010071 | SFE-10.7MA5 RED |
| X102 | 3010071 | SFE-10.7MA5 RED <P/T/W/A> |
| X103 | 3010071 | SFE-10.7MA5 RED <D> |
| X103 | 3010130 | SFE10.7MZ2K <P/T/W/A> |
| X104 | 3010268 | CSB456F23 |
| | **Oscillators** | |
| X121 | 3010141 | XTL-7.2M |
| X181 | 3010203 | AF6146CG <P> |

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **Capacitors** | |
| C101,C128 | 354741019 | 100 μ F,16V,Elect. |
| C130,C159 | 354780229 | 2.2 μ F,50V,Elect. |
| C131 | 374722234 | 0.022 μ F ± 5%,50V,Plastic |
| C132,C153 | 354783399 | 0.33 μ F,50V,Elect. |
| C133,C142 | 354741019 | 100 μ F,16V,Elect. |
| C145,C149 | 354780479 | 4.7 μ F,50V,Elect. |
| C146 | 374723324 | 3300pF ± 5%,50V,Plastic |
| C147 | 374721034 | 0.01 μ F ± 5%,50V,Plastic <P/T/W/A |
| C147 | 374721534 | 0.015 μ F ± 5%,50V,Plastic <D> |
| C151,C152 | 354780109 | 1 μ F,50V,Elect. |
| C154,C162 | 354741009 | 10 μ F,16V,Elect. |
| C155,C156 | 374721034 | 0.01 μ F ± 5%,50V,Plastic <D> |
| C155,C156 | 374724724 | 4700pF ± 5%,50V,Plastic <P/T/A> |
| C155,C156 | 374725624 | 5600pF ± 5%,50V,Plastic <W> |
| C160 | 354784799 | 0.47 μ F,50V,Elect. |
| C166 | 354741009 | 10 μ F,16V,Elect. |
| C168 | 374724734 | 0.047 μ F ± 5%,50V,Plastic |
| C171,C172 | 354741009 | 10 μ F,16V,Elect. |
| C173,C174 | 374722724 | 2700pF ± 5%,50V,Plastic <P/T/W/A> |
| C175,C176 | 374721024 | 1000pF ± 5%,50V,Plastic <D> |
| C177 | 354780229 | 2.2 μ F,50V,Elect. |
| C183 | 354721019 | 100 μ F,6.3V,Elect. <P> |
| C184 | 354780229 | 2.2 μ F,50V,Elect. <P> |
| C186 | 374725614 | 560pF ± 5%,50V,Plastic <P> |
| | **Resistors** | |
| R001 | 431533355 | 3.3MΩ,1/2W,Solid <D> |
| R150 | 5210261 | N06HR5KBC,Trimming |
| R158 | 5210263 | N06HR20KBC,Trimming |
| | **Terminals** | |
| P101 | 25060222 | NTM-2PDML144 or |
| P101 | 25060239 | NTM-4PDML161 or |
| P101 or | 25060117 | NTM-2PDML051 <P/T/W/A> |
| P101 or | 25060195 | NTM-4PDML117 <D> |
| | **Sockets** | |
| P102b | 25050986 | NSCT-14P773 <D/T/W/A> |
| P102b | 25050987 | NSCT-16P774 <P> |
| | **Switch** | |
| S101 | 25065286 | NSS-22112 <W> |
| | **Plug** | |
| TP101 | 25055038 | NPLG-2P29 |
| | Shield plate | |
| TU001a | 27150397 | Front end <P/T/W/A> |

# SCHEMATIC DIAGRAM



D E F G




#PARTS

| # | TU001 | R105 | R106 | R107 | R108 | C103 | Q101 | X102 | R110 |
|---|---|---|---|---|---|---|---|---|---|
| DTYPE | TFFJ2U552A | NONE | NONE | NONE | NONE | NONE | NONE | NONE | 1K |
| PTYPE | ENV1729961 | 33K | 6.8K | 330 | 680 | 223Z | 2SC945AP | SFE10.7MA5 | 470 |
| MTYPE | ENV1729961 | 33K | 6.8K | 330 | 680 | 223Z | 2SC945AP | SFE10.7MA5 | 470 |

| # | X103 | R142 | C147 | C148 | C150 | R153/154 | C155/156 | L107/108 | L109/110 |
|---|---|---|---|---|---|---|---|---|---|
| DTYPE | SFE10.7MA5 | 47K | 153J | 101J | NONE | 8.2K | 103J | NONE | NCH-2140 |
| PTYPE | SFE10.7MZ2A | 56K | 103J | 470J | 471K | 15K | 472J | NMC4085 | NONE |
| MTYPE | SFE10.7MZ2A | 56K | 103J | 470J | 471K | 15K | 562J | NMC4085 | NONE |

| # | C173/174 | C175/176 | Q181 | X181 | C181-C188 | R191-196 | S101 |
|---|---|---|---|---|---|---|---|
| DTYPE | NONE | 101J | NONE | NONE | NONE | NONE | NONE |
| PTYPE | 272J | NONE | YES | YES | YES | YES | NONE |
| MTYPE | 272J | NONE | NONE | NONE | NONE | NONE | YES |

# PRINTED CIRCUIT BOARD - PARTS LIST

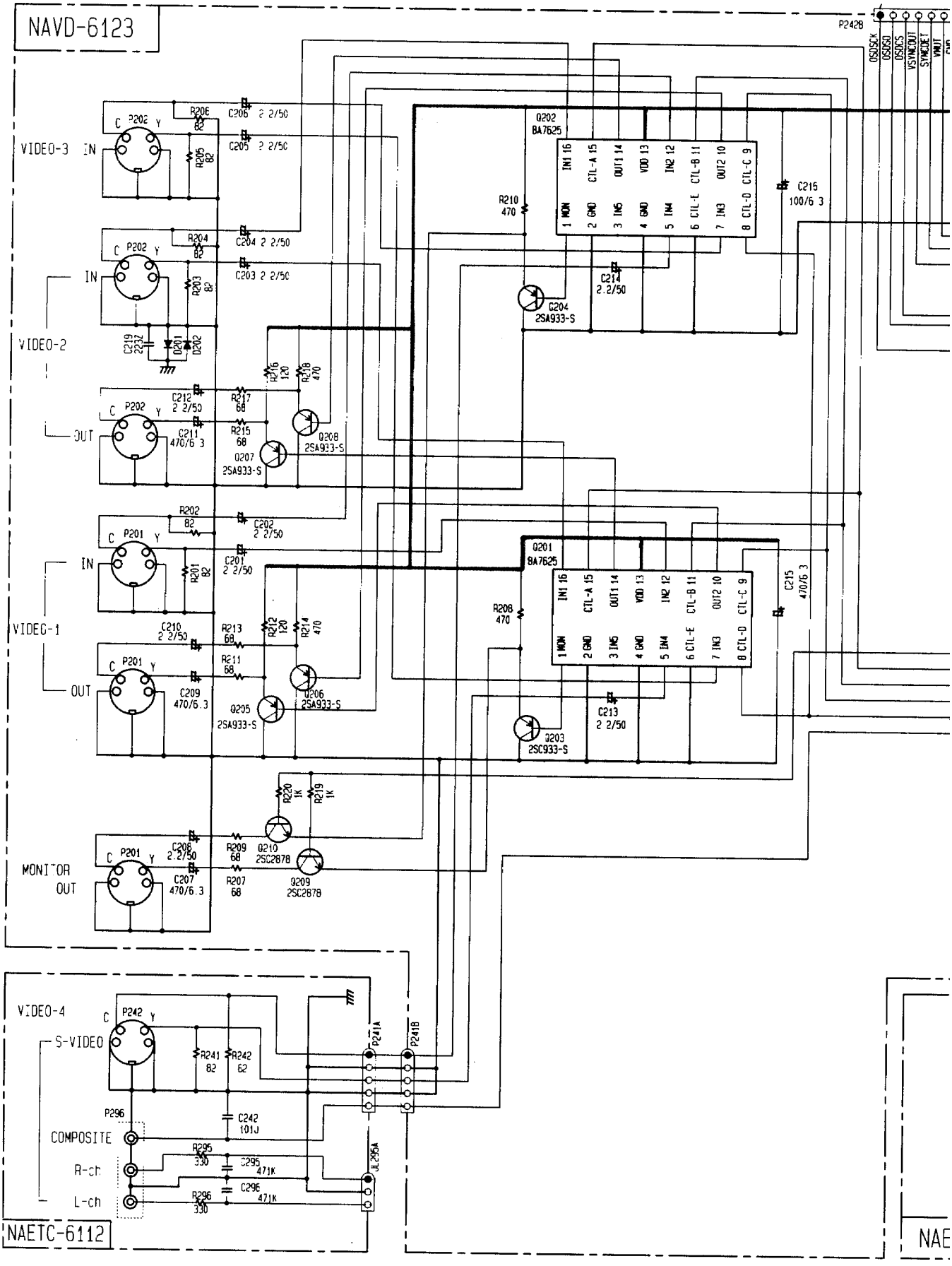
**VIDEO CIRCUIT PC BOARD(NAVD-6122-3A/3B)**

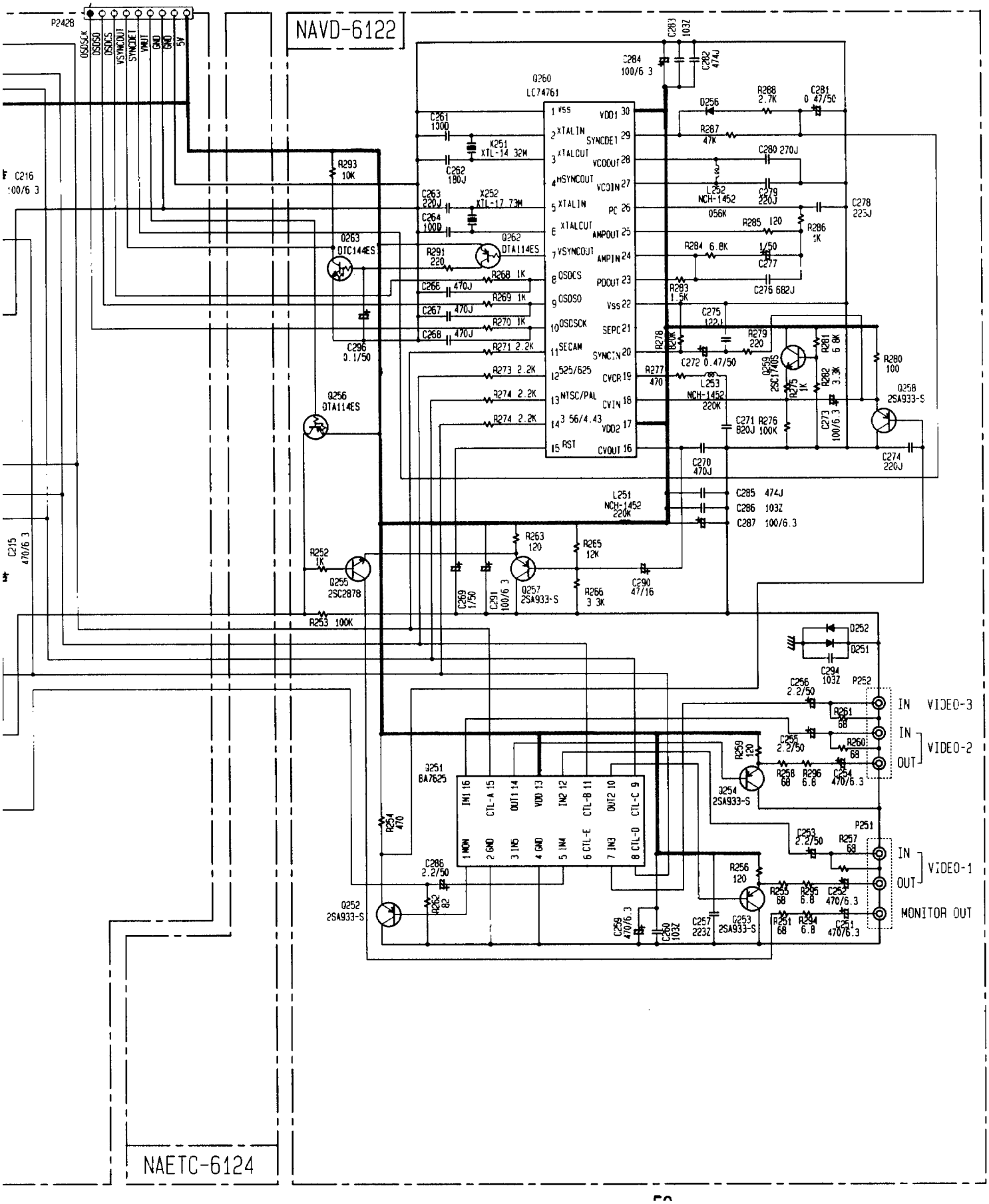
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **ICs** | |
| Q251 | 22240373 | BA7625 |
| Q260 | 22241037 | LC74761-**** |
| | **Transistors** | |
| Q252-Q254 | 2213354 or | 2SA933S-R or |
| Q257,Q258 | 2212125 | 2SA1048-GR |
| Q255 | 2212286 or | 2SC2878-B or |
| | 2212285 | 2SC2878-A |
| Q256 | 2213510 or | DTA114ES or |
| | 2214350 | RN2202 |
| Q259 | 2213284 | 2SC1740S-R |
| Q262 | 2213510 | DTA114ES |
| Q263 | 221282 | DTC144ES |
| | **Diodes** | |
| D251,D252 | 223205 or | 1SS270A or |
| D256 | 223163 | 1SS133 |
| | **Oscillators** | |
| X251 | 3010167 | XTL-14.32M |
| X252 | 3010238 | XTL-17.73M <P/T/W/A> |
| | **Capacitors** | |
| C251,C252 | 354724719 | 470 μ F,6.3V,Elect. |
| C253,C255 | 354780229 | 2.2 μ F,50V,Elect. |
| C254,C259 | 354724719 | 470 μ F,6.3V,Elect. |
| C256,C288 | 354780229 | 2.2 μ F,50V,Elect. |
| C269,C277 | 354780109 | 1 μ F,50V,Elect. |
| C272,C281 | 354784799 | 0.47 μ F,50V,Elect. |
| C273,C284 | 354721019 | 100 μ F,6.3V,Elect. |
| C275 | 374721224 | 1200pF ± 5%,50V,Plastic |
| C278 | 374722234 | 0.022 μ F ± 5%,50V,Plastic |
| C282,C285 | 375524744 | 0.47 μ F ± 5%,50V,Plastic |
| C287,C291 | 354721019 | 100 μ F,6.3V,Elect. |
| C290 | 354744709 | 47 μ F,16V,Elect. |
| C296 | 354781099 | 0.1 μ F,50V,Elect. |
| | **Terminals** | |
| P251,P252 | 25045457 or | NPJ-3PDYE278 or |
| | 25045299 | NPJ-3PDYE158 |
| | **Plugs** | |
| JL242c | 25055630 | NPLG-9P592 <D> |
| P243a | 25055233 | NPLG-2P217 <D> |

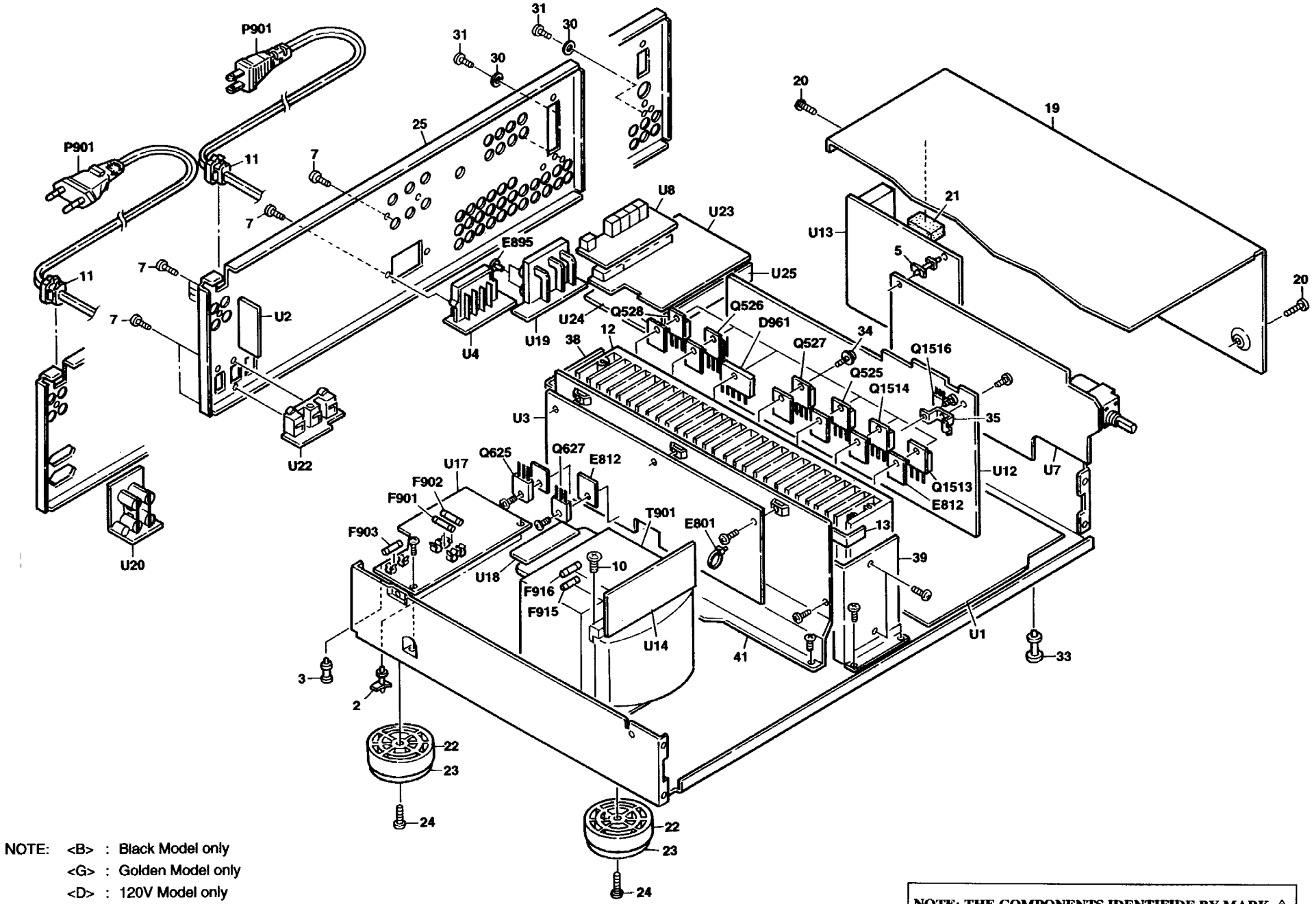
**S VIDEO CIRCUIT PC BOARD(NAVD-6123-3B)**

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---|---|---|
| | **ICs** | |
| Q201,Q202 | 22240373 | BA7625 |
| | **Transistors** | |
| Q203-Q208 | 2213354 or | 2SA933S-R or |
| | 2212125 | 2SA1048-GR |
| Q209,Q210 | 2212286 or | 2SC2878-B or |
| | 2212285 | 2SC2878-A |
| | **Diodes** | |
| D201,D202 | 223205 or | 1SS270A or |
| | 223163 | 1SS133 |
| | **Capacitors** | |
| C201-C206 | 354780229 | 2.2 μ F,50V,Elect. |
| C207,C209 | 354724719 | 470 μ F,6.3V,Elect. |
| C208,C210 | 354780229 | 2.2 μ F,50V,Elect. |
| C211,C215 | 354724719 | 470 μ F,6.3V,Elect. |
| C212-C214 | 354780229 | 2.2 μ F,50V,Elect. |
| C216 | 354721019 | 100 μ F,6.3V,Elect. |
| | **Sockets** | |
| P201,P202 | 25051568 | NSCT-12P1355 |
| | Plugs | |
| JL242b | 25055630 | NPLG-9P592 |
| P241a | 25055135 | NPLG-5P119 |

# SCHEMATIC DIAGRAM (Except 120V model)




NAVD-6122
NAETC-6124
P2428
OSDSCK
OSDSO
OSDCS
VSYNCOUT
SYNCDET
VMUT
GND
GND
5V
Q260
LC74761
VSS
XTALIN
XTALCUT
HSYNCOUT
XTALIN
XTALCUT
VSYNCOUT
OSDCS
OSDSO
OSDSCK
SECAM
525/625
NTSC/PAL
3.56/4.43
RST
VDD1
SYNCDET
VCOOUT
VCOIN
PC
AMPOUT
AMPIN
PDOUT
VSS
SEPC
SYNCIN
CVCR
CVIN
VDD2
CVOUT
X251 XTL-14.32M
X252 XTL-17.73M
Q263 DTC144ES
Q262 DTA114ES
Q256 DTA114ES
Q255 2SC2878
Q257 2SA933-S
Q258 2SA933-S
Q254 2SA933-S
Q253 2SA933-S
Q252 2SA933-S
Q259 2SC1740S
L251 NCH-1452 220K
L252 NCH-1452 056K
L253 NCH-1452 220K
U251 BA7625
IN1
CTL-A
OUT1
VDD
IN2
CTL-B
OUT2
CTL-C
MON
GND
IN5
GND
IN4
CTL-E
IN3
CTL-D
P251
P252
IN VIDEO-3
IN
OUT VIDEO-2
IN
OUT VIDEO-1
MONITOR OUT




NOTE: <B> : Black Model only
<G> : Golden Model only
<D> : 120V Model only
<P> : 230V Model only
<T> : Asian Model only
<W> : Worldwide Model only
<A> : Australian model only

**NOTE: THE COMPONENTS IDENTIFIDE BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIDE.**

# PARTS LIST

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| 1 | 27100328A | Chassis |
| 2 | 27190503A | KGLS-8RF,Holder |
| 3 | 27190428A | KGLS-10RF,Holder |
| 5 | 27190062 | KGLS-12S,Holder |
| 7 | 838130088 | 3TTB+8B,Self-tapping screw |
| 10 | 830440089 | 4TTC+8C(BC),Self-tapping screw |
| 11 | 27300750 | ⚠ #2271, Bushing cord |
| 12 | 27160388 | Heatsink |
| 13 | 29110083 | Tape |
| 16 | 28325509 | Knob, Volume <B> |
| | 28325511 | Knob, Volume <G> |
| 17 | 28325405 | Knob, Tone <B> |
| | 28325407 | Knob, Tone <G> |
| 18 | 28325500 | Knob, Jog <B> |
| | 28325502 | Knob, Jog <G> |
| 19 | 28184698 | Top cover <B> |
| | 28184701 | Top cover <G> |
| 20 | 838430088 | 3TTB+8B(BC),Self-tapping screw <B> |
| | 838230080 | 3TTB+8B(Ni),Self-tapping screw <G> |
| 21 | 28141235 | Cushion |
| 22 | 27175319A | Leg |
| 23 | 28141332 | Cushion |
| 24 | 831430088 | 3TTW+8B(BC),Self-tapping screw |
| 25 | 27122374 | Rear panel <D> |
| | 27122375 | Rear panel <P> |
| | 27122376 | Rear panel <T> |
| | 27122377A | Rear panel <W> |
| | 27122378 | Rear panel <A> |
| 26 | 27190470 | KGLS-18S, Holder |
| 29 | 27300243 | WS-2W, Clamp |
| 30 | 87643010 | W3*10F(BC), Washer |
| 31 | 838230088 | 3TTB+8B(NI), Nickel screw |
| 33 | 27190813 | KGPS-10RF, Holder |
| 34 | 801433 | 3SMS8W.SW+14B(BC), Special screw |
| 35 | 27141681 | Retainer |
| 36 | 28140680 | Cushion |
| 38 | 27141693 | Retainer, Rear |
| 39 | 27141694 | Retainer, Front |
| 41 | 27160386 | Heatsink |
| 52 | 27211947 | Front panel <D> |
| | 27211948 | Front panel <P> |
| | 27211949 | Front panel <T/W/A> |
| | 27211950 | Front panel <G> |
| 53 | 28135244 | Badge <B> |
| | 28135245 | Badge <G> |
| 54 | 28198778 | Facet |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| 59 | 27111022 | Front bracket <D/T/W/A> |
| | 27111023 | Front bracket <P> |
| | 27111024 | Front bracket <G> |
| 60 | 27215278 | Decorative frame <B> |
| | 27215280 | Decorative frame <G> |
| 63 | 27191014 | Holder |
| 68 | 28325542 | Knob, Mode <B> |
| | 28325544 | Knob, Mode <G> |
| 69 | 28191792A | Clear plate <B> |
| | 28191793A | Clear plate <G> |
| 70 | 28325497A | Knob, Power <P/T/W/A> |
| | 28325499A | Knob, Power <G> |
| 71 | 27273164 | Joint <P/T/W/A> |
| 72 | 27141686A | Retainer <P/T/W/A> |
| 74 | 838430107 | 3TTP+10S(BC), Self-tapping screw |
| D961 | 22380038 or | ⚠ RBV602 or |
| | 22380274 | ⚠ RS603M, Diode |
| E801 | 260208 | Wire tie |
| E812 | 223024 | ⚠ AC238, Isolation sheet |
| E895 | 880009 | NRP-345,Plastic rivet <P/T/A> |
| F901 | 252198 | ⚠ 8A-UL, Primary fuse <D/W> |
| F902 | 252077 | ⚠ 4A-SE-EAK,Primary fuse <P/T/W/A> |
| F903 | 252075 | ⚠ 2.5A-SE-EAK, Fuse <P> |
| | 252074 | ⚠ 2A-SE-EAK,Fuse <T/A> |
| F915,F916 | 252166 | ⚠ 6.3A-UL/T-237,Secondary fuse <D> |
| | 252079 | ⚠ 6.3A-SE-EAK,Secondary fuse <P/T/W/A> |
| JL701 | 2047402512 | NCFC7-402512,Flat cable |
| P901 | 253192HIT | ⚠ AS-UC-6#18(SPT-2),Power supply cord <D> |
| | 253233KAW | ⚠ AS-CEE-2,Power supply cord <P/T/W> |
| | 253197HIT | ⚠ AS-SAA,Power supply cord <A> |
| P904 | 25051570 | ⚠ NSCT-2P1357,AC outlet <A> |
| Q1516 | 2212654 or | 2SC3421-Y or |
| Q531,Q532 | 2212653 | 2SC3421-O,Transistor |
| Q625,Q626 | 2202922, | * 2SC5196-R, |
| | 2202923, | * 2SC5196-O, |
| | 2202373, | * 2SC4466-O, |
| | 2202375 or | * 2SC4466-P or |
| | 2202374 | * 2SC4466-Y, Transistor |
| Q627,Q628 | 2202912, | * 2SA1939-R, |
| | 2202913, | * 2SA1939-O, |
| | 2202363, | * 2SA1693-O, |
| | 2202365 or | * 2SA1693-P or |
| | 2202364 | * 2SA1693-Y, Transistor |
| Q1513 | 2202822 or | * 2SC5200-R or |
| Q525,Q526 | 2202823 | * 2SC5200-O,Transistor <D> |
| Q1514 | 2202812 or | * 2SA1943-R or |

| REF. NO. | PART NO. | | DESCRIPTION |
|---|---|---|---|
| Q527,Q528 | 2202813 | * | 2SA1943-O,Transistor <D> |
| Q1513 | 2201653, | * | 2SC3856-O, |
| Q525,Q526 | 2201655, | * | 2SC3856-P, |
| | 2201654, | * | 2SC3856-Y, |
| | 2202842 or | * | 2SC5242-R or |
| | 2202843 | * | 2SC5242-O, Transistor <P/T/W/A> |
| Q1514 | 2201663, | * | 2SA1492-O, |
| Q527,Q528 | 2201665, | * | 2SA1492-P, |
| | 2201664, | * | 2SA1492-Y, |
| | 2202832 or | * | 2SA1962-R or |
| | 2202833 | * | 2SA1962-O,Transistor <P/T/W/A> |
| T901 | 2301283 | ⚠ | NPT-1307D,Power transformer <D> |
| | 2301284 | ⚠ | NPT-1307P,Power transformer <P/T/A> |
| | 2301285 | ⚠ | NPT-1307DG,Power transformer <W> |
| U1 | 1A743595-3A | | NAAR-6095-3A,Main circuit pc board ass'y <D> |
| | 1A743595-3B | | NAAR-6095-3B,Main circuit pc board ass'y <P> |
| | 1A743595-3C | | NAAR-6095-3C,Main circuit pc board ass'y <T/A> |
| | 1A743595-3D | | NAAR-6095-3D,Main circuit pc board ass'y <W> |
| U2 | 1A743596 3A | | NAETC-6096-3A,RI/MR terminal pc board ass'y <D> |
| | 1A743596-3B | | NAETC-6096-3B,RI/MR terminal pc board ass'y <P> |
| | 1A743596-3C | | NAETC-6096-3C,RI/MR terminal pc board ass'y <T/A> |
| | 1A743596-3D | | NAETC-6096-3D,RI/MR terminal pc board ass'y <W> |
| U3 | 1A743597-3A | | NAAF-6097-3A,Surround power amp. pc board ass'y <D> |
| | 1A743597-3B | | NAAF-6097-3B,Surround power amp. pc board ass'y <P> |
| | 1A743597-3C | | NAAF-6097-3C,Surround power amp. pc board ass'y <T/A> |
| | 1A743597-3D | | NAAF-6097-3D,Surround power amp. pc board ass'y <W> |
| U5 | 1A743599-3A | | NAETC-6099-3A,Spekaer terminal pc board <D> |
| | 1A743599-3B | | NAETC-6099-3B,Spekaer terminal pc board <P> |
| | 1A743599-3C | | NAETC-6099-3C,Spekaer terminal pc board <T/A> |
| | 1A743599-3D | | NAETC-6099-3D,Spekaer terminal pc board <W> |
| U6 | 1A743500-3A | | NADIS-6100-3A,Display circuit pc board <D> |
| | 1A743500 3C | | NADIS-6100-3C,Display circuit pc board <P> |
| | 1A743500-3B | | NADIS-6100-3B,Display circuit pc board <T/W/A> |
| U7 | 1A743501-3A | | NAAF-6101-3A,Electro volume circuit pc board <D> |
| | 1A743501-3C | | NAAF-6101-3C,Electro volume circuit pc board <P> |
| | 1A743501-3B | | NAAF-6101-3B,Electro volume circuit pc board <T/W/A> |
| U8 | 1A743502-3A | | NAETC-6102-3A,Pre. out/Main in terminal pc board ass'y <D> |
| | 1A743502-3C | | NAETC-6102-3C,Pre. out/Main in terminal pc board ass'y <P> |
| | 1A743502-3B | | NAETC-6102-3B,Pre. out/Main in terminal pc board ass'y <T/W/A> |
| U9 | 1A743503-3A | | NAAF-6103-3A,Tone volume pc board ass'y <D> |
| | 1A743503-3C | | NAAF-6103-3C,Tone volume pc board ass'y <P> |
| | 1A743503-3B | | NAAF-6103-3B,Tone volume pc board ass'y <T/W/A> |
| U10 | 1A743504-3A | | NAETC-6104-3A,Headphone terminal pc board ass'y <D> |
| | 1A743504-3C | | NAETC-6104-3C,Headphone terminal pc board ass'y <P> |
| | 1A743504-3B | | NAETC-6104-3B,Headphone terminal pc board ass'y <T/W/A> |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| U12 | 1A743508-3A | NAAF-6108-3A,Front/Center power amp. pc board ass'y <D> |
| | 1A743508-3B | NAAF-6108-3B,Front/Center power amp. pc board ass'y <P> |
| | 1A743508-3D | NAAF-6108-3D,Front/Center power amp. pc board ass'y <T> |
| | 1A743508-3C | NAAF-6108-3C,Front/Center power amp. pc board ass'y <W> |
| | 1A743508-3F | NAAF-6108-3F,Front/Center power amp. pc board ass'y <A> |
| U13 | 1A743509-3A | NARF-6109-3A,Tuner circuit pc board ass'y <D> |
| | 1A743509-3B | NARF-6109-3B,Tuner circuit pc board ass'y <P> |
| | 1A743509-3D | NARF-6109-3D,Tuner circuit pc board ass'y <T> |
| | 1A743509-3C | NARF-6109-3C,Tuner circuit pc board ass'y <W> |
| | 1A743509-3F | NARF-6109-3F,Tuner circuit pc board ass'y <A> |
| U14 | 1A743510-3A | NAETC-6110-3A,Secondary circuit pc board ass'y <D> |
| | 1A743510-3B | NAETC-6110-3B,Secondary circuit pc board ass'y <P> |
| | 1A743510-3D | NAETC-6110-3D,Secondary circuit pc board ass'y <T> |
| | 1A743510-3C | NAETC-6110-3C,Secondary circuit pc board ass'y <W> |
| | 1A743510-3F | NAETC-6110-3F,Secondary circuit pc board ass'y <A> |
| U16 | 1A743512-3A | NAETC-6112-3A,Video 4 terminal pc board ass'y <D> |
| | 1A743512-3B | NAETC-6112-3B,Video 4 terminal pc board ass'y <P> |
| | 1A743512-3D | NAETC-6112-3D,Video 4 terminal pc board ass'y <T> |
| | 1A743512-3C | NAETC-6112-3C,Video 4 terminal pc board ass'y <W> |
| | 1A743512-3F | NAETC-6112-3F,Video 4 terminal pc board ass'y <A> |
| U17 | 1A743513-3A | NAPS-6113-3A,Primary circuit pc board ass'y <D> |
| | 1A743513-3B | NAPS-6113-3B,Primary circuit pc board ass'y <P> |
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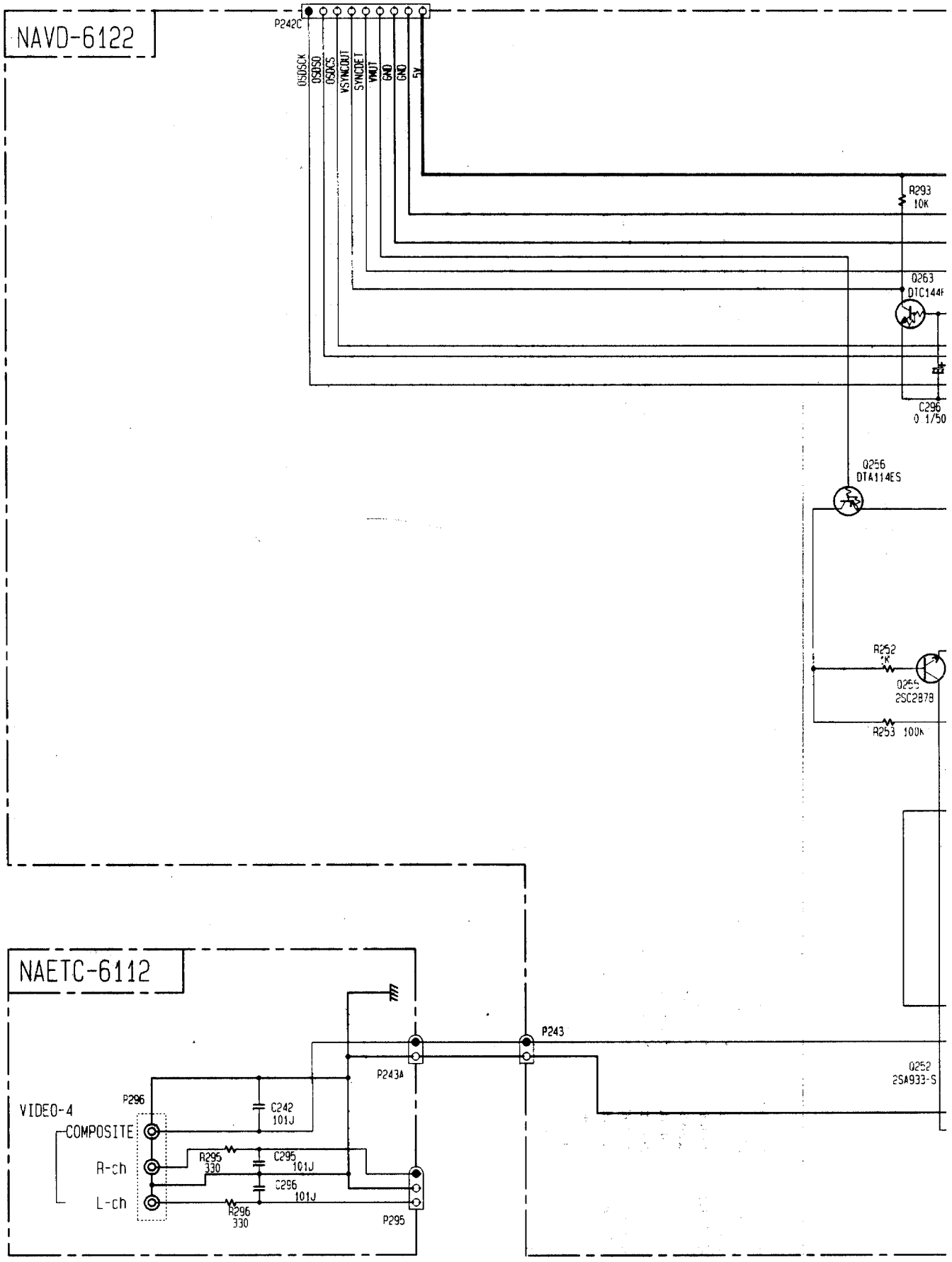
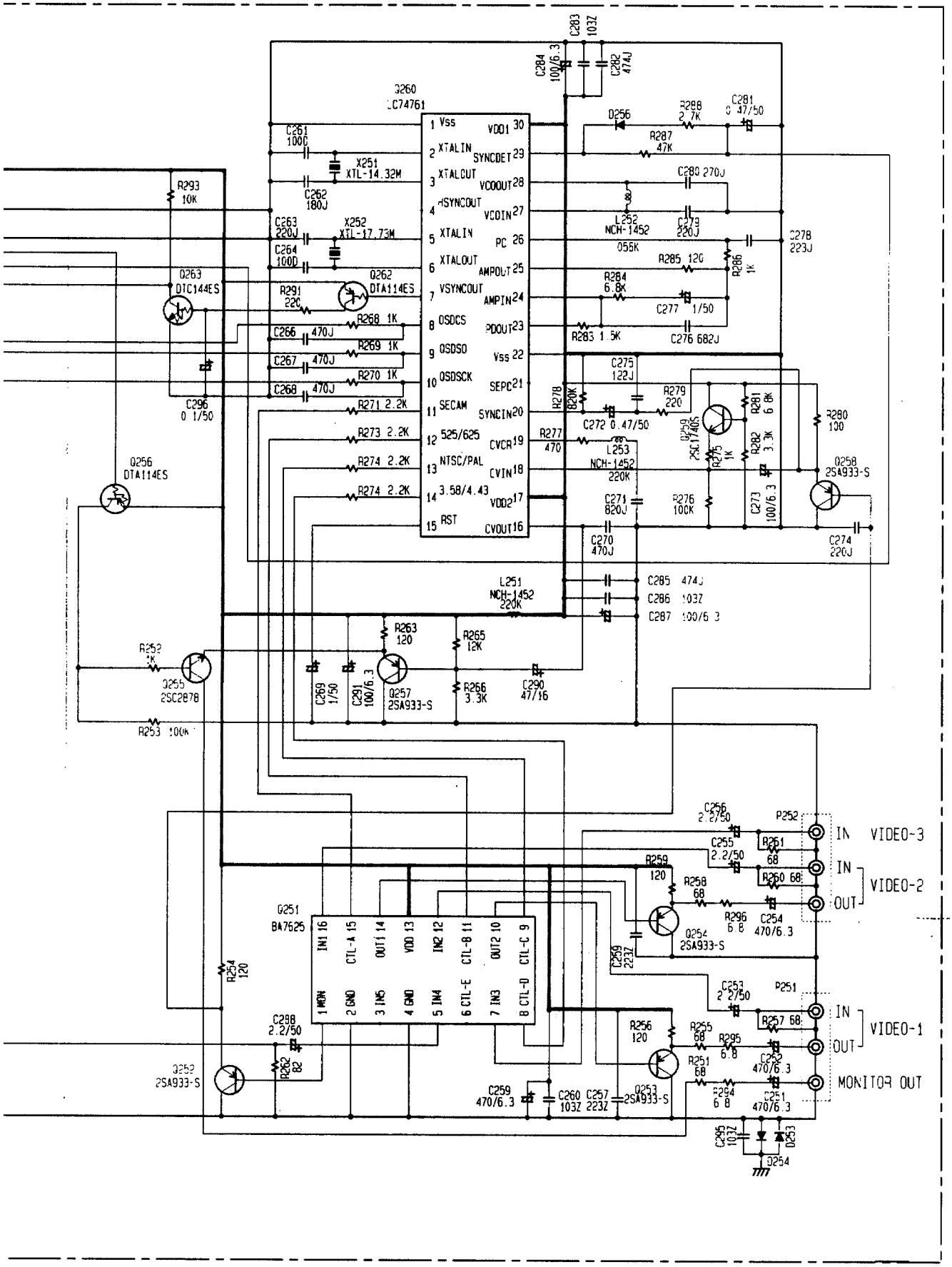
| | 1A743513-3C | NAPS-6113-3C,Primary circuit pc board ass'y <W> |
| | 1A743513-3F | NAPS-6113-3F,Primary circuit pc board ass'y <A> |
| U18 | 1A743514-3A | NAETC-6114-3A,Transformer terminal pc board ass'y <D> |
| | 1A743514-3B | NAETC-6114-3B,Transformer terminal pc board ass'y <P> |
| | 1A743514-3D | NAETC-6114-3D,Transformer terminal pc board ass'y <T> |
| | 1A743514-3C | NAETC-6114-3C,Transformer terminal pc board ass'y <W> |
| | 1A743514-3F | NAETC-6114-3F,Transformer terminal pc board ass'y <A> |
| U19 | 1A743515-3A | NAETC-6115-3A,Front/Center speaker terminal pc board ass'y <D> |
| | 1A743515-3B | NAETC-6115-3B,Front/Center speaker terminal pc board ass'y <P> |
| | 1A743515 3D | NAETC-6115-3D,Front/Center speaker terminal pc board ass'y <T> |
| | 1A743515-3C | NAETC-6115-3C,Front/Center speaker terminal pc board ass'y <W> |
| | 1A743515-3F | NAETC-6115-3F,Front/Center speaker terminal pc board ass'y <A> |
| U20 | 1A743516-3B | NAETC-6116-3B,AC outlet terminal pc board ass'y <P> |
| | 1A743516-3D | NAETC-6116-3D,AC outlet terminal pc board ass'y <T> |
| | 1A743516-3C | NAETC-6116-3C,AC outlet terminal pc board ass'y <W> |
| U21 | 1A743517-3B | NAPS-6117-3B,Power switch pc board <P> |
| | 1A743517-3D | NAPS-6117-3D,Power switch pc board <T> |
| | 1A743517-3C | NAPS-6117-3C,Power switch pc board <W> |
| | 1A743517-3F | NAPS-6117-3F,Power switch pc board <A> |
| U22 | 1A743518-3A | NAETC-6118-3A,AC outlet terminal pc board ass'y <D> |
| U23 | 1A743522-3A | NAVD-6122-3A,Video circuit pc board ass'y <D> |
| | 1A743522-3B | NAVD-6122-3B,Video circuit pc board ass'y <P/T/W/A> |
| U24 | 1A743523-3B | NAVD-6123-3B, S video circuit pc board ass'y <P/T/W/A> |
| U25 | 1A743524-3B | NAVD-6124-3B, Terminal pc board ass'y <P/T/W/A> |
| U26 | 1A743525-3A | NADG-6125-3A, DSP circuit pc board ass'y <D> |
| | 1A743525-3B | NADG-6125-3B, DSP circuit pc board ass'y <P/T/W/A> |

## SCHEMATIC DIAGRAM (120V model)

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LC74761
1 Vss
2 XTALIN
3 XTALOUT
4 HSYNCOUT
5 XTALIN
6 XTALOUT
7 VSYNCOUT
8 OSDCS
9 OSDSO
10 OSDSCK
11 SECAM
12 525/625
13 NTSC/PAL
14 3.58/4.43
15 RST
VDD1 30
SYNCDET 29
VCOOUT 28
VCOIN 27
PC 26
AMPOUT 25
AMPIN 24
PDOUT 23
Vss 22
SEPC 21
SYNCIN 20
CVCR 19
CVIN 18
VDD2 17
CVOUT 16
X251 XTL-14.32M
X252 XTL-17.73M
Q263 DTC144ES
Q262 DTA114ES
Q256 DTA114ES
Q255 2SC2878
Q257 2SA933-S
Q258 2SA933-S
Q259 2SC1740S
Q251 BA7625
IN1 16
CTL-A 15
OUT1 14
VDD 13
IN2 12
CTL-B 11
OUT2 10
CTL-C 9
1 MON
2 GND
3 IN5
4 GND
5 IN4
6 CTL-E
7 IN3
8 CTL-D
Q252 2SA933-S
Q253 2SA933-S
Q254 2SA933-S
L251 NCH-1452 220K
L252 NCH-1452 056K
L253 NCH-1452 220K
P252
P251
IN VIDEO-3
IN
OUT
VIDEO-2
IN
OUT
VIDEO-1
MONITOR OUT